VOLUME XXXVI NUMBER ONE

THE NATIONAL GEOGRAPHIC MAGAZINE

JULY, 1919

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To carry out the purpose for which it was founded thirty-one years ago, the National Geographic Society publishes this Magazine. All receipts from the publication are invested in the Magazine itself or expended directly to promote geographic knowledge and the study of geography. Articles or photographs from members of the Society, or other friends, are desired. For material that the Magazine can use, generous remuneration is made. Contributions should be accompanied by an addressed return envelope and postage, and be addressed: Editor, National Geographic Magazine, 16th and M Streets, Washington, D. C.

Important contributions to geographic science are constantly being made through expeditions financed by funds set aside from the Society's income. For example, immediately after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. So important was the completion of this work considered that four expeditions have followed and the extraordinary scientific data resultant given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures, evidently formed by nature as a huge safety-valve for erupting Katmai. By proclamation of the President of the United States, this area has been created a National Monument. The Society organized and supported a large party, which made a three-year study of Alaskan glacial fields, the most remarkable in existence. At an expense of over $50,000 it has sent a notable series of expeditions into Peru to investigate the traces of the Inca race. The discoveries of these expeditions form a large share of the world's knowledge of a civilization which was waning when Pizarro first set foot in Peru. Trained geologists were sent to Mt. Pelee, La Soufriere, and Messina following the eruptions and earthquakes. The Society also had the honor of subscribing a substantial sum to the historic expedition of Admiral Peary, who discovered the North Pole April 6, 1909. Not long ago the Society granted $20,000 to the Federal Government when the congressional appropriation for the purchase was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people and incorporated into a National Park.

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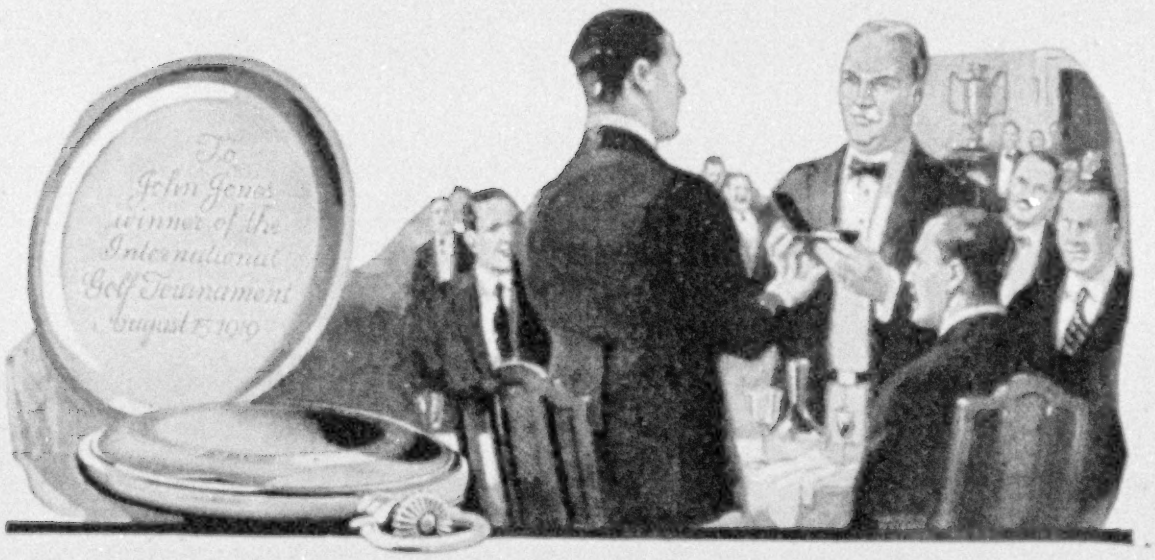

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WHY waste money on a cup that stands for a lifetime on the mantel when you can give the winner of your tournament a Hamilton Watch, a worth-while trophy that will tick for a lifetime in his pocket and always give him accurate time?

A cup is a trophy a few friends will see on the occasion of a visit. A Hamilton Watch is a constant friend which will constantly save him time. If it is known that he is punctual, others will be punctual with him. And a Hamilton owner is always punctual.

There is no tournament or competition that does not call for accuracy of mind or body—tennis, golf, track, polo, chess, whist, baseball, football, basket-ball, boxing, rowing and water sports. An accurate watch for an accurate man is the most appropriate prize.

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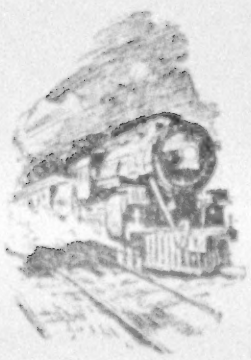

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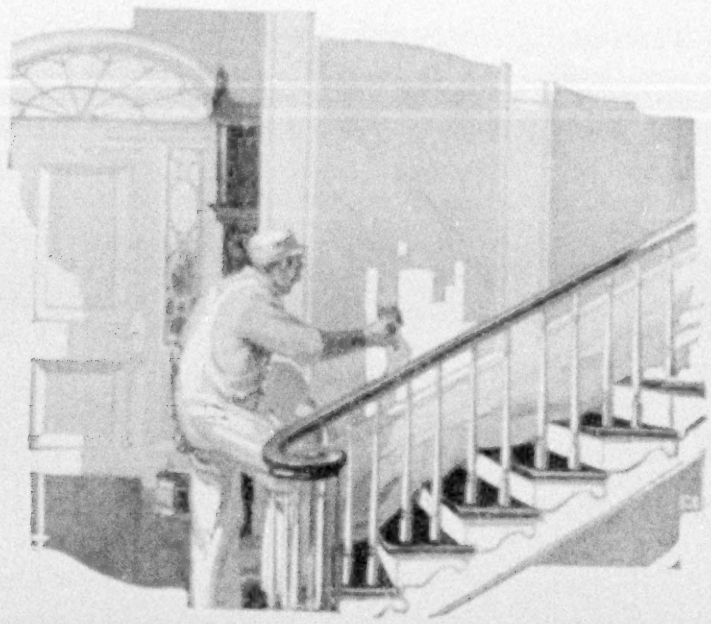

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The rich, flat, restful coloring on many walls, unsurpassed for artistic effect, is secured by the use of an oil paint.

The material that gives wall paint its purity of color, its flat finish, its covering power and its wear resistance is Lithopone—a Zinc product.

Thus in the beauty and the durability of the surfaces in your home you indirectly benefit from the experience, resources and processes of The New Jersey Zinc Company whose Zinc Oxide and Lithopone go into the making of the finest grades of interior finishes.

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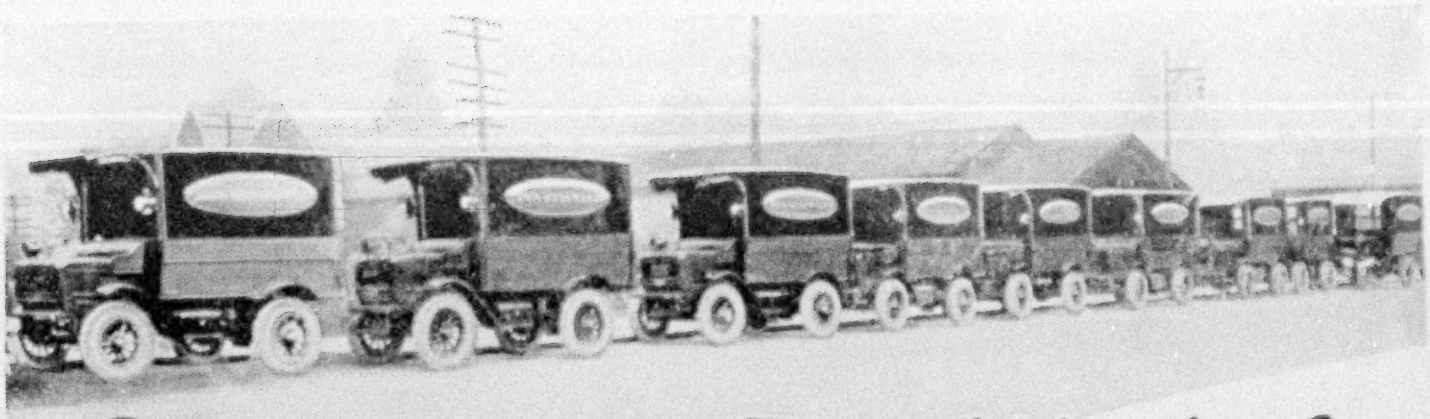


Big Work for a Big Store

The delivery system of a great city store is an extremely high-powered and high-tensioned service, which directly affects the convenience and satisfaction of thousands of customers. Its effectiveness is gauged by its swiftness and smoothness; its success is measured by its safety and certainty. Naturally, the need of perfected equipment is imperative.

JOHN WANAMAKER, Philadelphia, operates a large number of two-ton trucks in his delivery system. These trucks are required to travel long distances at high speed and cover a large area each day.

This fleet of cars covers an average of 4,000 miles daily. It carries a total daily average of 45 tons of goods. It is kept constantly keyed up to a big job—and does it well!

It is a significant fact that 50 of these Wanamaker cars are equipped with 'Nobby Cord' Truck Tires—the big, burly tires that are built for long mileage and hard usage. The tires that welcome any test.

'Nobby Cords' cut costs of operation. They minimize repairs and replacements. They are known to reduce truck depreciation 50 per cent. and to save 30 per cent. in gas and oil consumption.

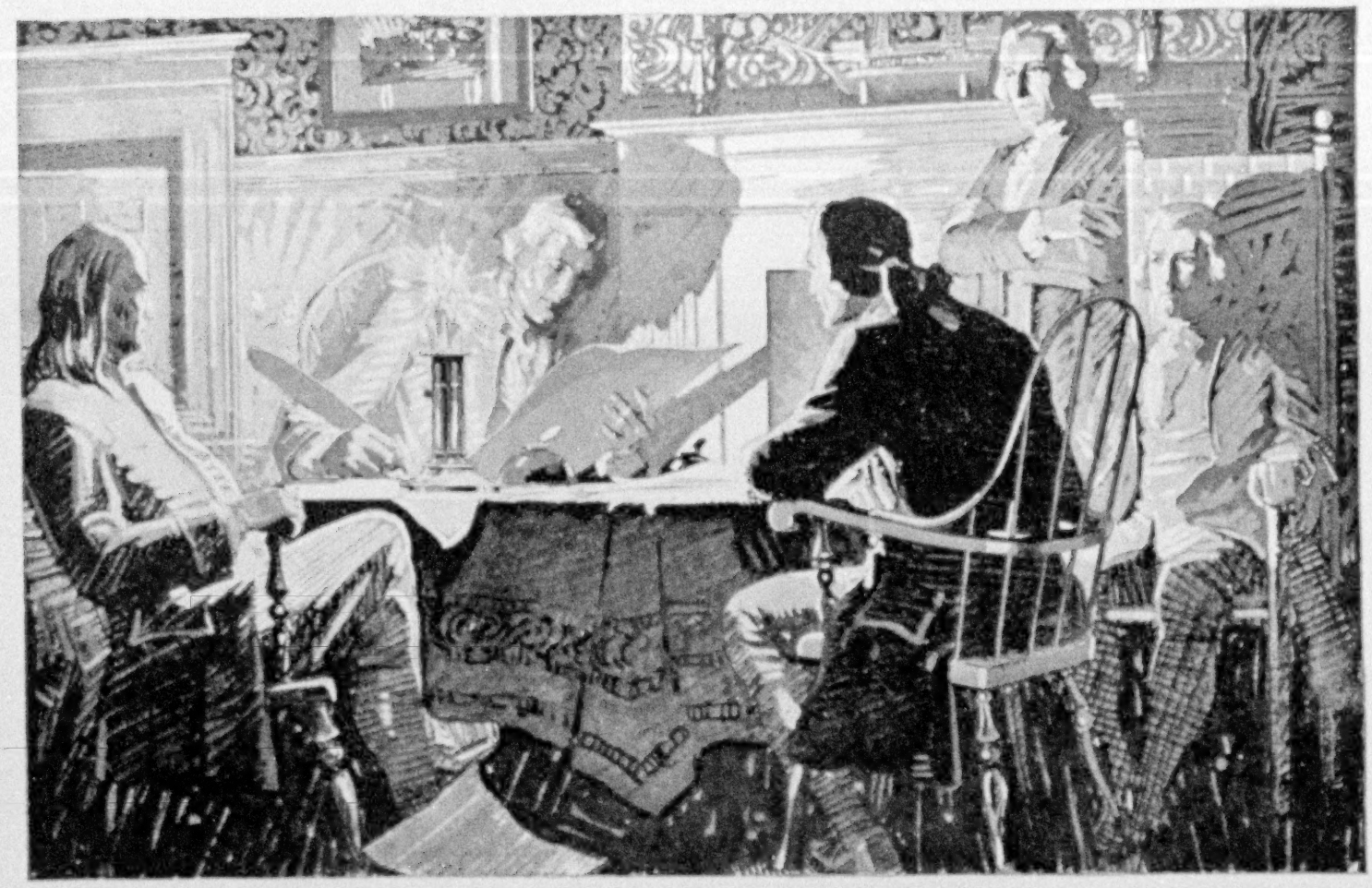
'Nobby Cords' are remarkable for their incredible strength and sturdiness. A carcass that is almost unassailable and a cover that is almost impregnable. A veritable fortress in power of resistance.

Many big users have found complete tire satisfaction in 'Nobby Cords'. Always ready to tackle any task—no road too long—no load too big—no job too strenuous.

For passenger and light delivery cars—'Royal Cord', 'Nobby', 'Chain', 'Usco' and 'Plain'. Also tires for cycles, airplanes and solid tires for trucks.

'Nobby Cord'
for trucks

United States Tires are Good Tires



By the Declaration of Independence on July 4, 1776 a new nation was given birth

IN a century and a half the thirteen original states have increased to forty-nine and the nation has extended its boundaries from the Atlantic to the Pacific.

From an original mill of but 75,000 barrels annual capacity, located in a small Pennsylvania village, the Lehigh Portland Cement Company has grown to a national industry with an annual capacity of over 15,000,000 barrels from its fifteen mills so located as to serve the nation from coast to coast. For the nation's concrete Lehigh service provides "Lehigh," the National Cement.

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The National Cement

LEHIGH CEMENT

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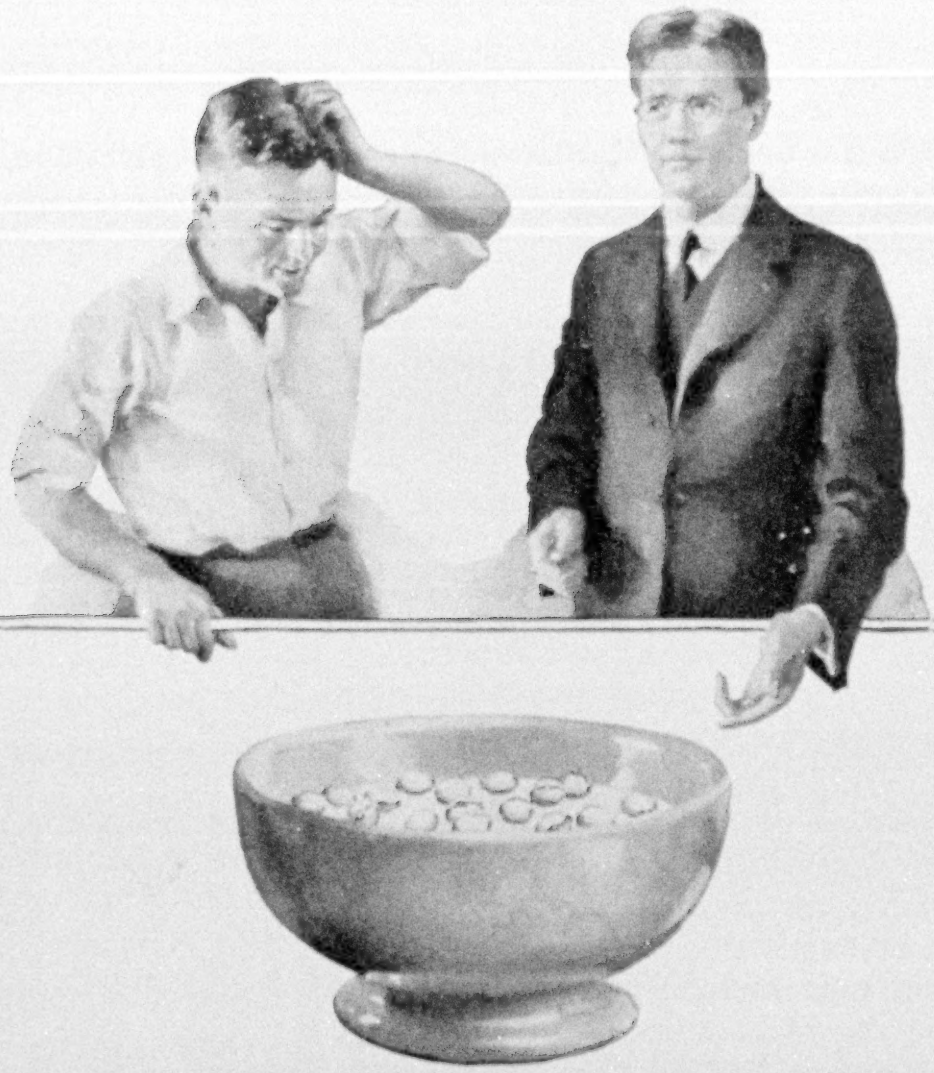

"See, Mr. Farmer

What I've Done With Your Wheat"

Prof. A. P. Anderson took whole wheat and sealed it in huge guns. For sixty minutes he revolved the guns in a fearful heat, and turned all the wheat moisture to steam.

Then he shot the guns and the steam exploded. Every food cell was blasted for easy digestion. The wheat kernels were puffed to thin, toasted bubbles, eight times normal size.

Created the Supreme Food

Thus he made whole wheat so completely digestible that every atom feeds. He made it so flaky, so flavory, so enticing, that children revel in it.

When you float it in milk you have the greatest food in the world. It tastes like a food confection. It is the best-cooked food in existence—the easiest grain food to digest.

It combines whole wheat and milk. It's a vast mistake in these summer days not to have this dish ever handy.

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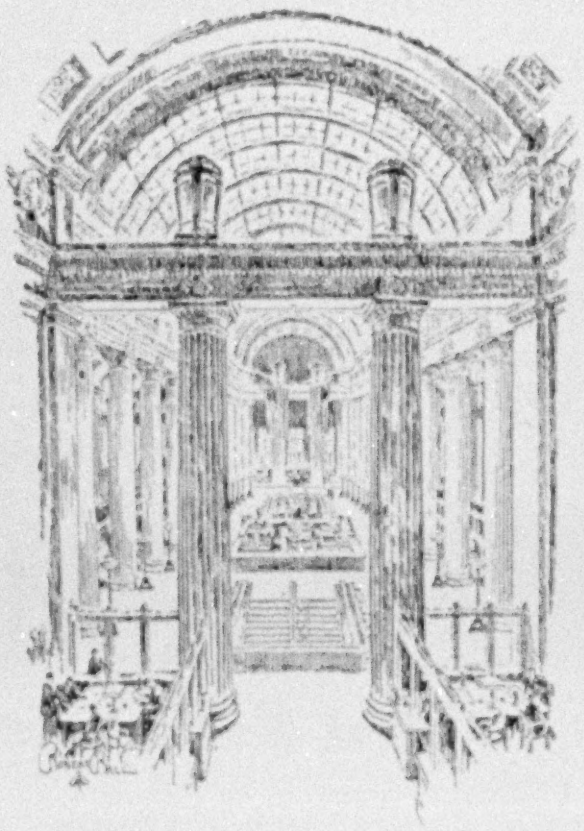

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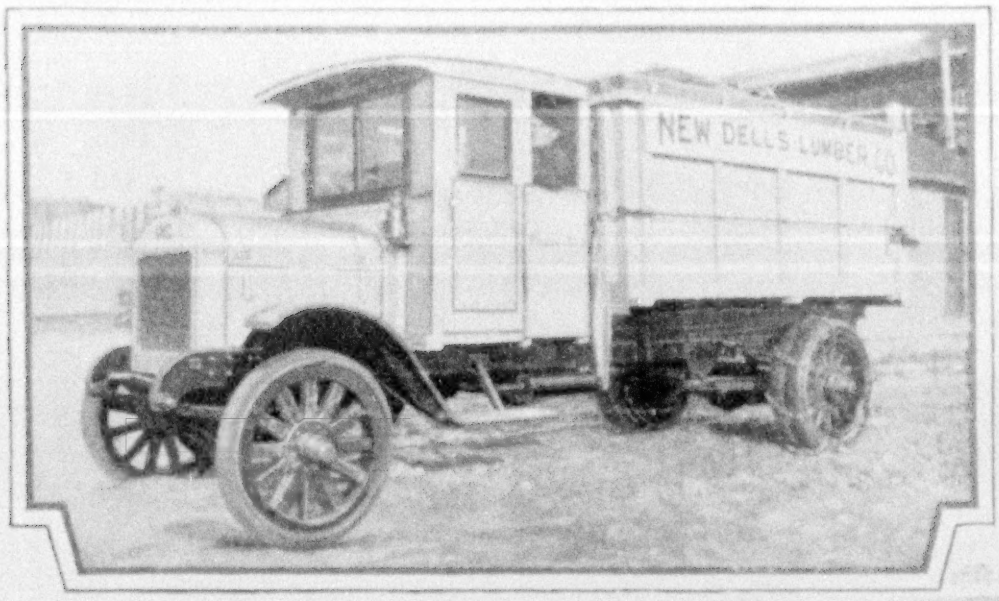
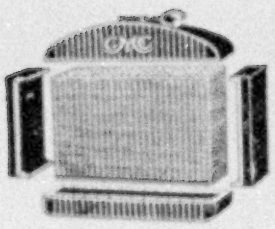


GMC TRUCKS



1 GMC; 1 Driver, Displace 16 Horses; 4 Drivers; 4 Wagons

For Example

Take radiator construction as an example of GMC thoroughness. This vertical-tube, continuous fin core is the most efficient known. It does not depend on solder for assembly strength. It is firmly bolted together. It rests on two brackets bolted to the chassis frame; no springs or dash-pots are used.

One GMC and one driver are doing the work that 16 horses, 4 drivers, and 4 wagons used to do for the New Dells Lumber Company, Eau Claire, Wisconsin.

Starting at 7 o'clock in the morning, this GMC truck makes 20 to 30 trips a day, delivering green mill wood over town under all conditions of weather.

It hauls 3½ tons at a load and is always on the job.

Estimate the cost of feeding, stabling, grooming, and harnessing 16 horses. Figure the upkeep of four wagons.

Then figure the wages of four drivers, and consider the employment problem involved.

This is a typical example of GMC truck utility. Your business may be different, but among the GMC models, ranging from ¾ ton to 5 tons, is one admirably fitted for your work.

Behind every GMC is the backing of the General Motors Truck Company and its policy of plain, honest quality.

Let your next truck be a GMC.

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GMC TRUCKS

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The Family at Work

Here is Took-a-le-kee'-ta's cousin, An'ne-vik, with her mother, father, and baby brother, Nee-wak. She likes to sit on the log and watch father carve a knife or a scraper from walrus tusks. Father's name is Koo-gak, and he is often called Koo-gak the Hunter. Her mother's name is Too'ma-sok.

On the back of mother's fur cloak she has a warm pocket, in which Nee-wak rides safe and cozy even when the cold winds sting mother's face. In the house she takes off her coat with the fur hood and ties him to her back with soft strips of leather.

She has fur slippers and seal-skin boots to wear over them. Do you think she must be too warm in her fur clothes? Oh, no! In winter she wears two fur suits, the inner with the soft fur next to her skin.

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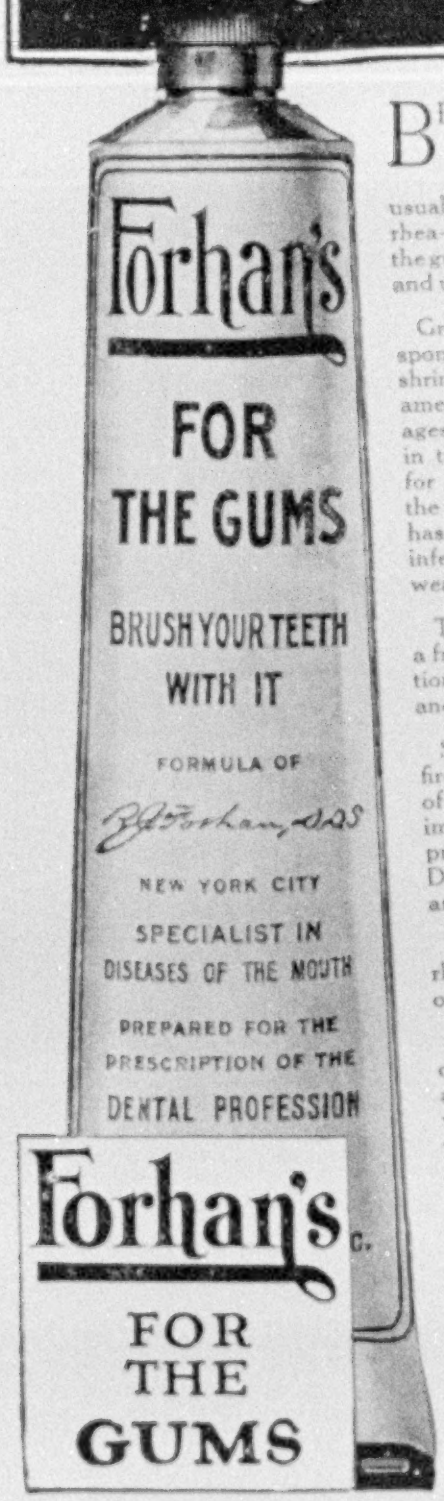
Be suspicious of tender gums



BE suspicious of any tenderness or bleeding of the gums. This is usually the first stage of Pyorrhea—an insidious disease of the gums that destroys the teeth and undermines bodily health.

Gradually the gums become spongy. They inflame, then shrink, thus exposing the unenameled tooth-base to the ravages of decay. Tiny openings in the gums form gateways for disease germs to enter the system. Medical science has traced many ills to these infecting germs in the gums weakened by Pyorrhea.

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And in preventing Pyorrhea—it guards against other ills.

Forhan's (For the Gums) cleans teeth scientifically as well. Brush your teeth with it. It keeps the teeth white and clean.

If gum-shrinkage has already set in, start using Forhan's and consult a dentist immediately for special treatment.

35c and 60c tubes
All Druggists

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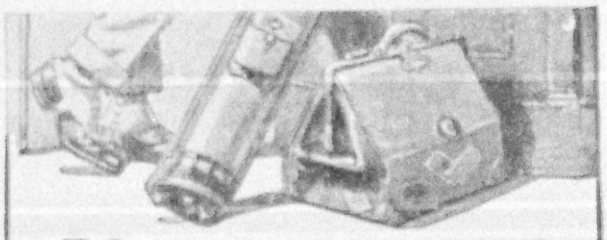

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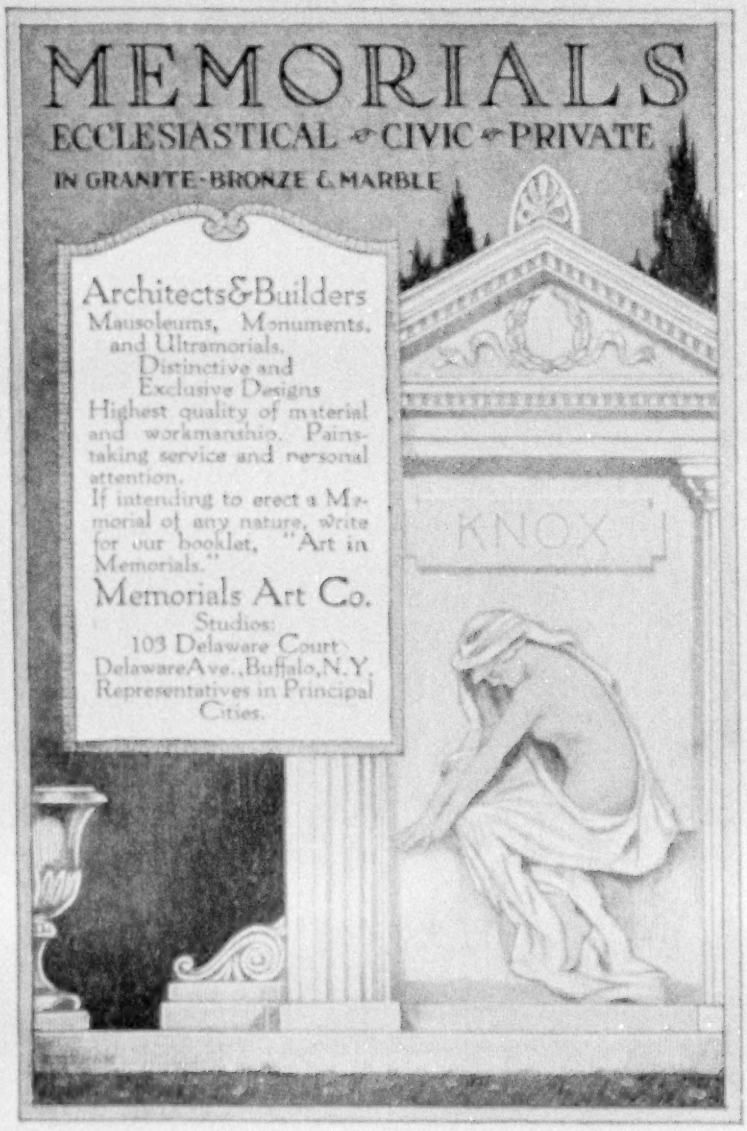

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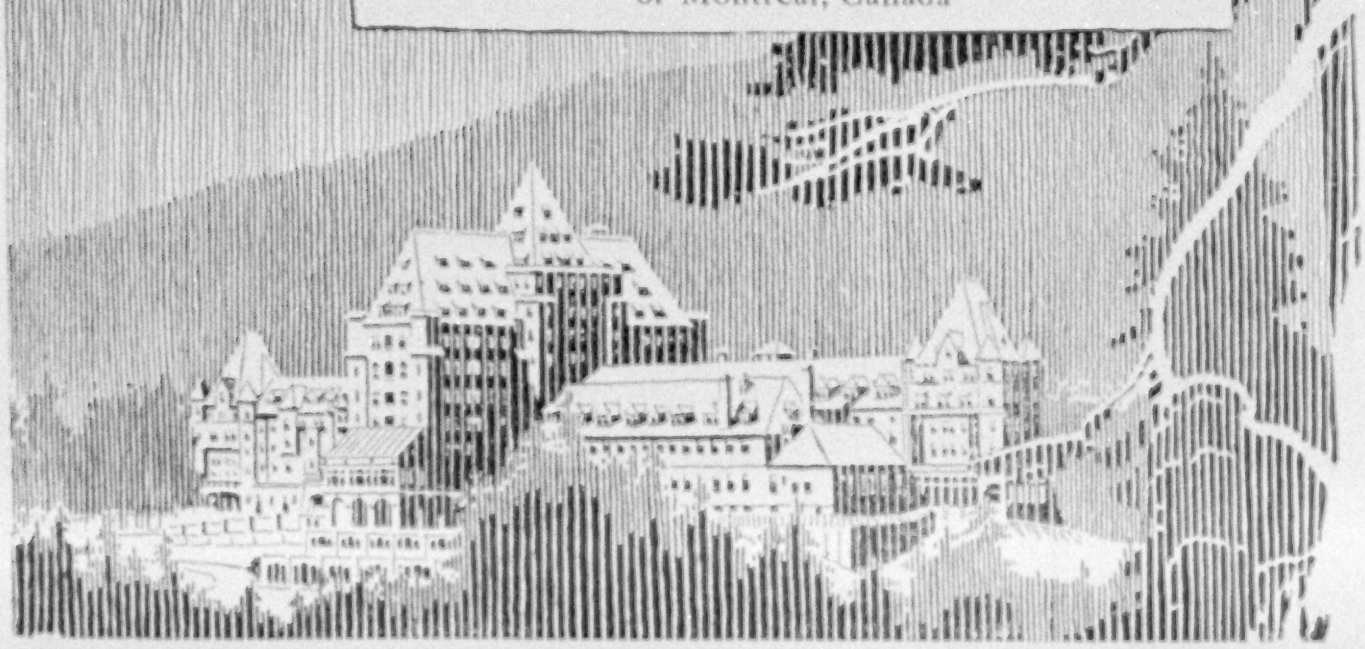

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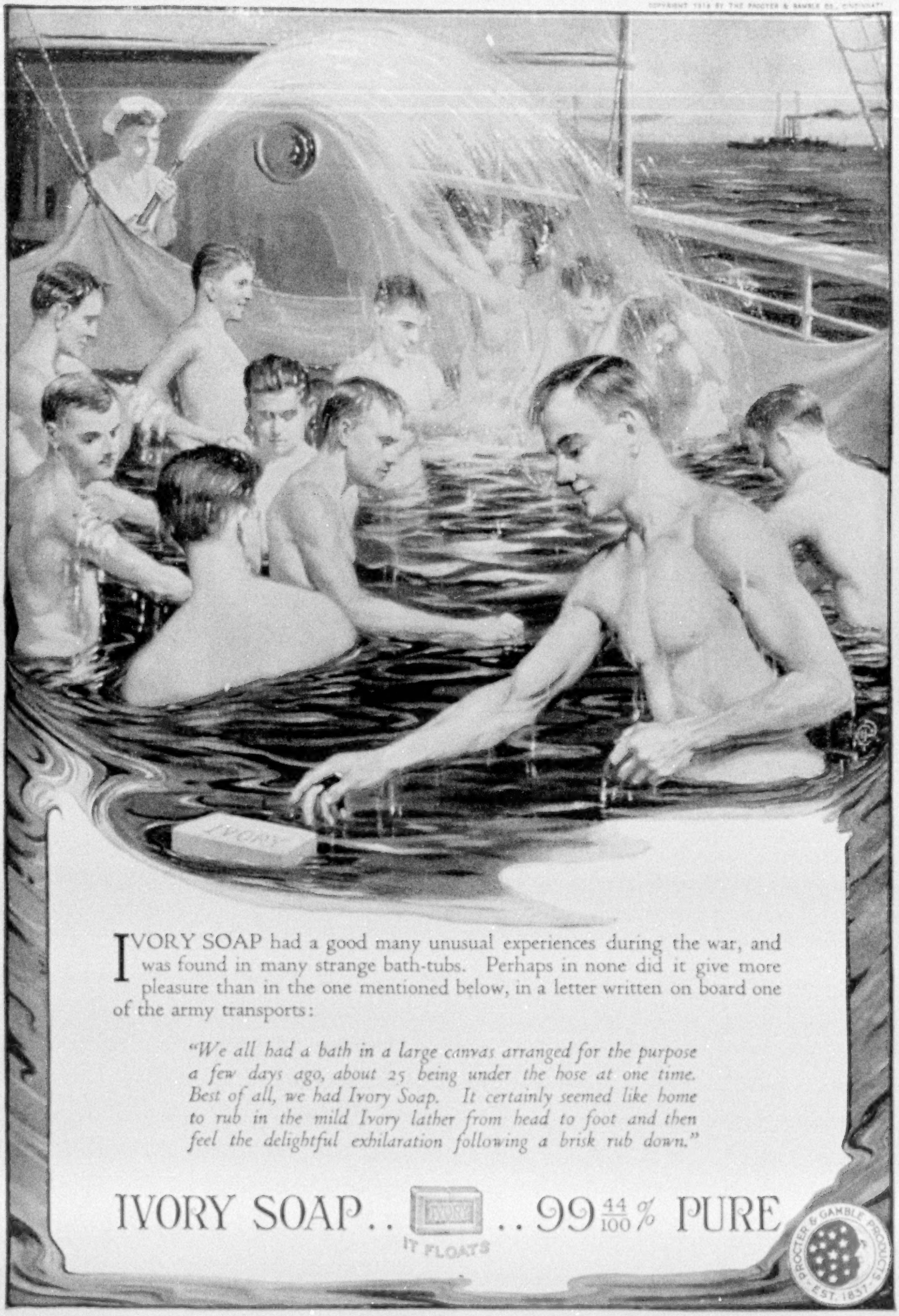

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THE PROGRESSIVE WORLD STRUGGLE OF THE JEWS FOR CIVIL EQUALITY*

By William Howard Taft

Author, in the National Geographic Magazine, of "Some Recent Instances of National Altruism," "The Arbitration Treaties," "Washington: Its Beginning, Its Growth, and Its Future," "Great Britain's Bread Upon the Waters," "The Health and Morale of America's Citizen Army," and "The League of Nations"

WITHIN the limits of this article one can hope to give only the merest sketch of the history which the subject of the Jews involves.

I need not pause to emphasize the remarkable character of the Jewish people. They are unique in that for eighteen hundred years they have had no country, have been dispersed to the four quarters of the globe, and yet have retained their religion, their cohesion, their intellectual capacity, their loyalty to their race, and have, whenever there was any pretense of equality of opportunity for them, forged their way ahead into positions of prominence, influence, and power in business, professions, in philosophy, in art, in literature, and in government.

They have at the same time made loyal subjects or citizens of the countries in which they have lived whenever they have been accorded any reasonable protection of civil rights. No other people has ever been subjected to such continuous persecution in denial of opportunity to make a living and pursuit of happiness, in humiliating restriction upon their liberty, in exclusion from education, and indeed in actual physical cruelty and massacre.

* An address delivered by the ex-President, William Howard Taft, before the National Geographic Society at Washington, D. C.

THE DISPERSION OF THE JEWS BEGINS

During the three hundred years before Christ, the Jews were under Greek control and influence. Jerusalem was attacked many times and sacked, with the consequent dispersion into other countries of many of its people. They migrated into Syria, into Arabia, into Egypt, and became numerous and prominent in Alexandria. Indeed, there were, it is said, as many as a million Jews in Egypt before the Christian era.

When the Roman and the Parthian empires constituted the world, Jews were to be found in every commercial center, and in each there was a Jewish community and synagogue and a relationship maintained with Jerusalem.

The Jews flocked to Rome. Tiberius issued an order excluding them, but it was only enforced for a short time and they returned in great numbers. Although the Emperor Claudius announced his intention of banishing them again, they were so many that he gave it up.

In the first and second centuries after Christ, Nero, Vespasian, Titus, Trajan, and Hadrian found the Jews of Palestine

Photograph from R. S. Cresswell

JEWISH SCRIBES AT SALONIKI WRITING SACRED BOOKS ON SCROLLS, AS IN THE OLDEN DAYS

This work is very beautifully executed on parchment in strong black ink. The Oral Law, so called, of the Jews was codified by rabbis, after the expulsion from Jerusalem, into the Palestinian Talmud. The written law was the law of Moses, contained in the Pentateuch and known as the "Torah." The remainder of the Old Testament was divided into the "Prophets" and the "Writings" (see page 3).

unruly and undisposed to yield to their authority and campaigns were waged against them. Jerusalem was taken in the year 70 by Titus and the Temple destroyed. In the year 135 it was taken again by Hadrian's generals and the city destroyed.

THOUSANDS SENT IN BONDAGE TO SPAIN

Hadrian rebuilt the city and substituted a temple to Jupiter in the place of the temple to Jehovah. The Jews were expelled from the city and forbidden to come within sight of its walls. This brought about the great "diaspora," or second dispersion, which sent the people of Israel to the uttermost parts of the earth, some going voluntarily and others taken as prisoners. It is said that 80,000 prisoners were sent to Spain, where they found the Jewish communities which had moved on from Rome.

Photograph by Maynard Owen Williams

A SCENE IN PALESTINE, WHERE THE JEW HAS BEEN A STRANGER IN HIS OWN LAND FOR CENTURIES

After two millenniums of exile, the Jew may now return in safety to the land of his fathers and abide there with the assurance that his civil as well as his religious liberty will be safeguarded by civilized nations.

After the expulsion from Jerusalem, the scribes and Pharisees established a school and Sanhedrin at Jamnia, in Palestine, and somewhat later the center of church authority became Tiberias, on the Sea of Galilee, and for two hundred years an autonomous patriarchate under the Roman Empire flourished there. Here were institutions of learning in which the rabbis codified the traditions called the Oral Law into the Palestinian Talmud.

The seat of Jewish ecclesiastical authority then passed from Tiberias, in Palestine, to Babylonia, where great schools were established at Nehardea and Sura. In Babylonia three institutions of learning were conducted by the rabbis, who in the course of two hundred years framed the Babylonian Talmud.

The written law was the law of Moses, contained in the Pentateuch and known as the "Torah." The remainder of the Old Testament was divided into the "Prophets" and the "Writings," so called.

WITHOUT HOME OR COUNTRY

In the laws of Moses and the Talmud was to be found a collection of rules of conduct—physical, social, political, religious, moral, and philosophical—a strict and literal compliance with which became the life of the Jew. They offered a field for his study and mental occupation and discussion with his brethren which never ended. His duties thus prescribed were to be performed in the home and in the synagogue and in the academy, and these centers supplied to him what the fatherland was to others more fortunately situated.

The Torah and the Talmud established a direct relation to God on the part of each individual and an accountability for

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A SCENE IN BEERSHEBA: THE ANCIENT HOME OF THE JEWS STRETCHES FROM THIS POINT NORTHWARD TO DAN

Many leaders of Jewish thought maintain that to reassemble the exiles into a restored Judea is impossible. Their hope lies in a *new* Judea which shall be "quick with the fires of youth, and which shall carry forward into the unknown world of the future that same warm humanity and sane idealism with which ancient Judea enriched antiquity."

every minute of his waking hours that absorbed his attention and his interest. With no home, no country, no kindly sympathy from any one but his own kind, he found his happiness within his own circle and in the refuge from sorrow which his life within the law gave him.

Their great historian says of the Jews: "In the vicissitudes of their fate for a great many centuries they were saved 'by their own inner life, pure home life, idealism of the synagogue, and belief in ultimate Messianic redemption' from utter demoralization and despair."

JEWS GRANTED FULL FREEDOM BY SARACENS

From Pumbeditha and Sura, in Babylonia, in the eleventh century, the seat of Jewish ecclesiastical authority seems to have passed to Spain, where, under the Saracens in Cordova and Toledo and Granada, the Jews were given full freedom and scope for their activities and for the practice of their religion, and for the further discussion of the Jewish faith and philosophy.

The two Talmuds are very voluminous, and in the centuries after their issue their legal contents were digested and condensed into more usable form for daily consultation and use. From time to time philosophers and leaders of Jewish thought appeared.

Philo of Alexandria, Maimonides of Spain, and Moses Mendelssohn were the three great lights, the first in the beginning of the Christian era, the second in the Middle Ages, and the third in the eighteenth century and late enough to furnish the type to Lessing for that wonderful character of Nathan der Weise.

False Messiahs appeared and misled many to their sorrow. Mysticism played its part and books promoting it were written, causing protest and controversy. Commentaries were published by some Jewish leaders of thought which were pronounced heretical by others. Spinoza, the great philosopher, was excommunicated by the Dutch rabbis.

But in spite of these differences, constantly during the seventeen centuries of gloom and woe, somewhere in the world was a religious center of Jewish authority to which Israel turned for hope and inspiration.

The strictly orthodox Jews have always adhered closely to the rabbinical law of the Talmud, but under the influence of Mendelssohn and the leadership of other liberals among his successors a division occurred, and there arose a liberal and reformed school among them, which grew in number as the conditions for their assimilation with the local environment became more favorable and they were relieved from the forced exclusiveness and misery of the Ghetto.

TWO JEWISH TONGUES

The speech of the Jews has had an interesting history. Hebrew, Aramaic, Greek, Arabic, and all European languages were from time to time spoken by them. Finally, in their wanderings, there grew up two hybrid mediums—one the Yiddish, or Jargon, and the other the Ladino.

The former, which has an extensive literature, is based on the medieval German, but is written in the Hebrew characters and is mixed with Hebrew and influenced by the vernacular. It is used by the Ashkenazim, or German Jews of northern and eastern Europe.

The latter, the Ladino, or Spaniol, is Spanish in its basis and mixed with Hebrew and Turkish. It is used by the Sephardim, or the Spanish Jews, and has been carried by them to Africa, Turkey, Bulgaria, Serbia, and Greece.

Recurring now to the history of the race after the second dispersion: In Rome, after the Christian era, Jews and Christians flocked in great numbers. In the chaos of skepticism, religions, and philosophies, there was a cult among some of the Romans that led them to embrace Judaism; but generally the Jews were exclusive, unexpansive, and contemptuous of other religions. They were especially hostile to the Christians, whom they regarded as traitors to their race for failing them in the wars of Vespasian and Titus, and whom they did not hesitate to accuse of many shortcomings in order to stir up Roman hostility against them.

THE LONG, DARK NIGHT OF JEWISH HISTORY

The Christians differed from the Jews in that they were most active mission-

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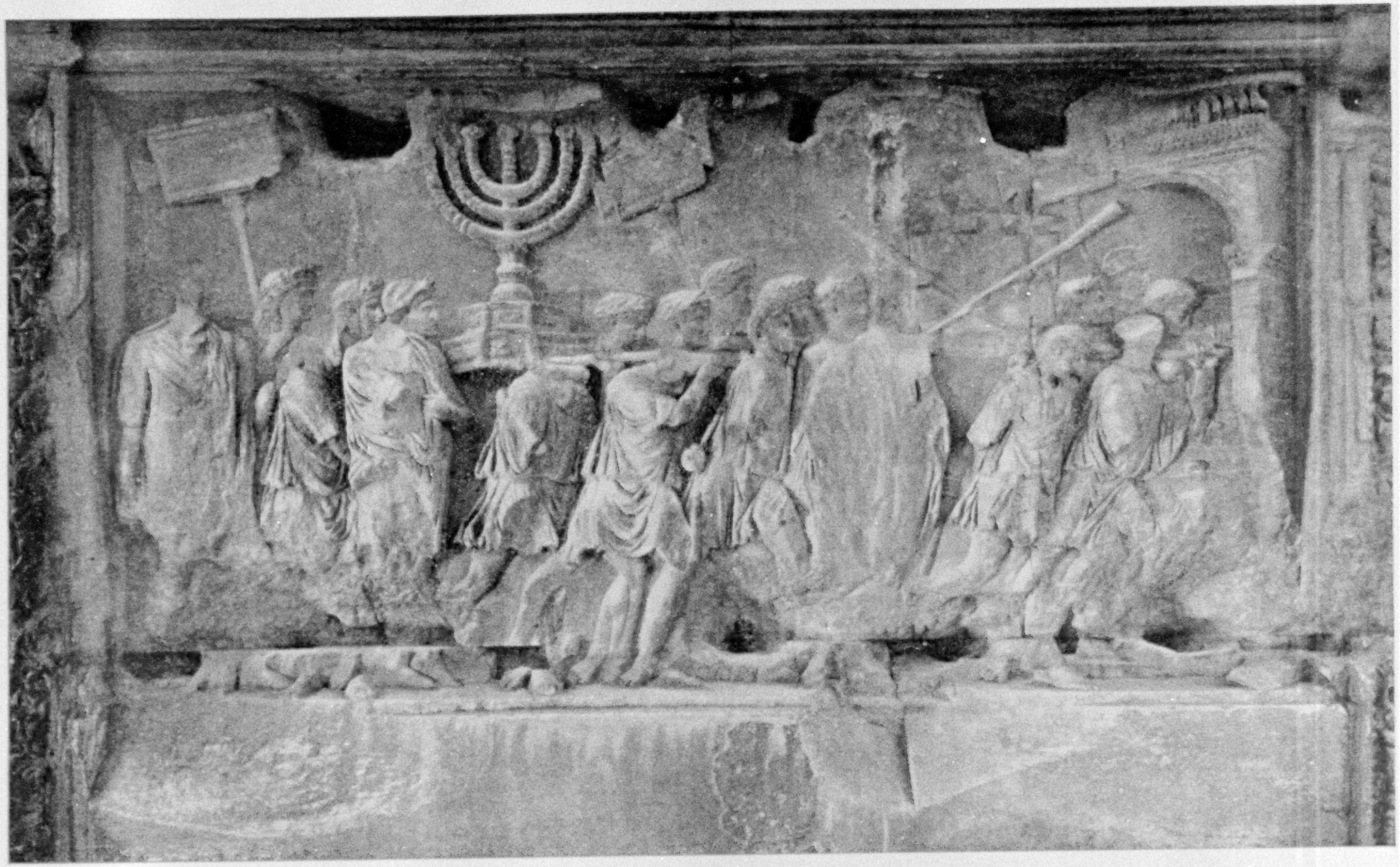

RELIEF WHICH DECORATES THE ARCH OF TITUS, SHOWING THE CAPTIVE JEWS AND THE SACRED SEVEN-BRANCHED CANDLESTICK

The great Triumphal Arch of Titus, which crowns the summit of the Velia, was erected to commemorate the defeat of the Jews and the sack of Jerusalem in A. D. 70. It was not dedicated until eleven years later, during the reign of the destroyer's successor, Domitian. The reliefs of this arch are among the finest sculptured remains of ancient Rome. They were badly damaged during the Middle Ages, when the arch was used as a fort by the Frangipani (see page 2).

Photograph by Maynard Owen Williams

TOURISTS IN THE HOME LAND OF THE CHOSEN PEOPLE

No other region of equal size on the face of the earth has exercised so potent an influence on civilization as Palestine, the geographical cradle of the Children of Israel.

aries, and they thus brought down on their heads persecutions which were directed nominally against both Jews and Christians, but the severities of which the Jews were able to escape.

The result of this situation in Rome and elsewhere placed the Jews at a great disadvantage when the Roman Empire became Christian under Constantine, and from that time on, in one form or another, we find constant Christian persecution of the Jews.

In the long, dark Jewish night, after Christianity became the creed of the Roman emperors, down to the nineteenth century, there were only two or three countries and comparatively short periods in which the Jews enjoyed tolerance, prosperity, and power and were able to develop the genius of their race.

In the eighth century Charlemagne, correctly estimating their value as subjects of his empire, granted them tolerance in religion and encouraged them in the development of a trade which greatly helped his empire and made many of them rich merchants. The fact that there were Jewish communities in every great commercial center, even of the most distant parts, gave them a marked facility in conducting international trade. Charlemagne's son and successor, Louis the Pious, continued his father's wise and kindly treatment of them.

THE JEWS FLOURISHED IN SPAIN

A little earlier than Charlemagne the Moslem invasion of Spain in 711 established the Crescent in the peninsula. Arabian and African Jews, who, after the persecution of them by Mahomet and Omar, had ingratiated themselves with their successors and had been given opportunity for education and development, accompanied the Saracens into Spain and there met their brethren, who had been greatly abused by the Visigoths and who were only too glad to unite in aiding the following of the Prophet to establish a kingdom.

There they developed trade, poetry, philosophy, science, and literature and

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Photograph by American Colony, Jerusalem

HEBRON, A GEOGRAPHICAL HOLY OF HOLIES OF THE JEWISH RACE: PALESTINE

The Arabic name for this city of 22,000 inhabitants is El-Khalil, referring to the fact that it is "the city of Abraham, the friend of God." An early tradition gives this as the birthplace of Adam. Abraham is supposed to have pitched his tents here. It was David's capital for more than seven years, and it was the headquarters of the rebellious Absalom.

art. They became ministers of the government and its representatives abroad. The kindly Saracenic soil for their growth gave a full development to the race, and the Spanish, or Sephardic, Jews were fine specimens of physical and intellectual manhood. They became in a way the aristocracy of the house of Israel.

This favorable condition continued until the reconquest of Spain by the Christians began, and lasted in lessening degree to the expulsion of the Moors from Granada, in the fifteenth century.

Meantime every great upheaval seemed to increase Jewish persecution and Jewish misery.

The First Crusade, in 1096, which developed such wonderful religious spirit in the middle and upper classes, led the scum and the rabble to a persecution of the Jews. This recurred in the Second Crusade, in 1146.

MASSACRES OF THE JEWS UNDER THE PLANTAGENETS

A cruel massacre of the Jews occurred in 1189 in England, at the time of the coronation of Richard I, although the king favored them and they had acquired a hold in England to such an extent that there had been established a Jewish exchequer, where Jews had to register all their transactions and through which the financial troubles of the Plantagenets were greatly remedied by Jewish gold. They were, however, expelled in 1290 from England by Edward I, it is said at the instance of the Queen Mother Eleanor, whose religious intolerance could not brook their presence.

The Fourth Lateran Council, under Innocent III, among many anti-Jewish measures, required Jews to wear a dress or badge indicating their race. Soon after in all the cities of Europe they were compelled to live in a particular quarter surrounded by walls and were locked in at night. Hemmed in and congested in these ghettos, the Jewry of Europe lived out their painful lives until the middle of the eighteenth century.

St. Louis of France expelled the Jews in 1254, treated them badly, and then invited them back. Philip IV expelled them, and nine years afterwards, in 1315, his successor, Louis X, recalled them. They were finally expelled by Charles VI in 1394.

ACCUSED OF BLACK-DEATH SORCERY

In 1348 and 1349 there came the plague of the "black death" all over Europe. Probably because of the hygienic effect of the Mosaic and Talmudic law, to which the Jews conformed with rigidity, they escaped the ravages of the epidemic.

This was noted among the people, and at once the report spread that the plague had come from wells poisoned by the Jews, and another series of massacres of these poor people followed everywhere. During the plague, Pope Clement VI issued two bulls in an attempt to protect the Jews.

The Popes in the course of the centuries, however, issued many bulls against the Jews. The bulls were enforced with much greater severity in other countries than by the Popes themselves, who in actual administration often exhibited much leniency toward this unfortunate race. Canon law had forbidden the taking of interest or usury by Christians; but this did not apply to the Jews, and as the Jews had the money, they did the lending.

They thus became objects of interest to the kings of the various countries who had to borrow money, and they were made private servants of the monarchs, *servi camaræ*, a position of apparent privilege which, however, in the end only subjected the Jews to greater persecution.

CHARGED WITH HUMAN SACRIFICE

An uncertain tolerance was the only relief from constant persecution, which was their usual condition after the crusades and the black plague. Every excuse for attacking them was seized. Huss in Bohemia proclaimed his adherence to the teachings of Wycliffe in 1420. He was persecuted by the church—but so, too, were the Jews—for his agitation among Christians, with which they had naught to do.

In 1481 the Inquisition was set on foot in Spain, and in 1492, after Granada fell, the Jews were expelled. They were driven into northern Africa, into Turkey, and into Italy.

XUM

Whenever bitterness or prejudice or private motive prompted hostility to the Jews, a common form of accusation was that of murder, and offering of a sacrifice of a Gentile child in their religious ceremonies was charged. A trial was had and, whether conviction followed or not, persecutions ran riot.

This method of attack has, as we know, continued down to the present generation in some countries. Lecky, in his "History of Morals in Europe," points out that this form of charge was made against a great many different sects in pagan Rome—against the Christians as well as others. It has survived only against the Jews.

POLAND ONCE A LAND OF REFUGE

The effect of the crusades, the black plague, the Inquisition in Spain, the Huss persecutions in Bohemia, and the annual massacres in Austria in the time of Rudolph of Hapsburg, was to drive the Jews to seek refuge in a country where life was possible. The country toward which they turned their eyes was Poland.

Poland was consolidated under Casimir III, the Great, in the fourteenth century, and was made still greater by the marriage of his grand-niece and heiress to Yaguello, the Grand Duke of Lithuania, who thereupon became the King of Poland and the founder of a dynasty which ruled from the latter part of the fourteenth to the latter part of the sixteenth century.

At the height of its expansion the Polish monarchy reached from the Baltic to the Black Sea and covered an area which down to this day harbors the great bulk of the Jewish population of Europe. If we leave out Prussian Poland and Austrian Galicia, the Russian present Jewish pale of settlement nearly coincides with the boundaries of this ancient Poland.

A "JEWISH JUDGE" APPOINTED

In 1334 Cassimir the Great of Poland confirmed a charter of general privileges to the Jews which had originally been given by a predecessor in 1264. The charter insured the economic progress of the Jews and gave guaranties of their personal and religious security.

They were exempted from the jurisdiction of the ecclesiastical as well as the municipal law courts and a "Jewish judge," so called, was appointed to act in their cases, significant of the abuses to which they had been subjected.

Cassimir's liberality attracted Jews from every quarter of Europe and greatly increased their number in Poland.

After the Yaguello dynasty the power passed from the kings to the Polish nobility, or Shlakta, and the protection to the Jews grew less and less. The burghers were hostile to them because of their competition, and the nobility, while using them as agents to conduct their estates, were arbitrary, cruel, and tyrannical.

Chaos ensued and the condition of the Jews grew worse. They were forbidden to hold land. The nobility manufactured the liquor, and they were willing and anxious to have the Jews sell it, who thus, for lack of other occupation, became the innkeepers, the purveyors in the demoralizing liquor business.

The reduction and elimination of the Polish Kingdom during the seventeenth and eighteenth centuries transferred the bulk of the Jews of the world to the jurisdiction of Russia, Germany, and Austria. Poland lost many of its provinces to Russia before the three formal partitions in the eighteenth century.

Except in the part of her Empire which Russia acquired from Poland, Russia never had and has not now but a very few Jews. Her eager acquisition of her large share of Poland, however, placed nearly half of the Jews of the world within her jurisdiction. They had not sought it.

THE FLIGHT TO HOLLAND

The adoption of the Inquisition by Spain in the fourteenth and fifteenth centuries led many of the Spanish Jews to become baptized into the Catholic Church and to go through the form of Christian worship, retaining secret allegiance to Judaism and observing its law as far as possible. They were called Maranos. This was a notable exception to the usual tenacity of the Jews in not only retaining their faith, but in avowing it under the most terrible ordeals.

The Maranos did not escape persecution by the Inquisition, however, and

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ENTRANCE TO THE MOSQUE OF HEBRON, BUILT BY THE CRUSADERS IN THE TWELFTH CENTURY

This ancient edifice, sacred alike to Jew, Gentile, and Mohammedan, is supposed to stand over the Cave of Machpelah, purchased from Ephron the Hittite by Abraham as a family burial place. Besides the patriarch and his wife Sarah, Isaac and Rebecca, Jacob and Leah are believed to have been buried here.

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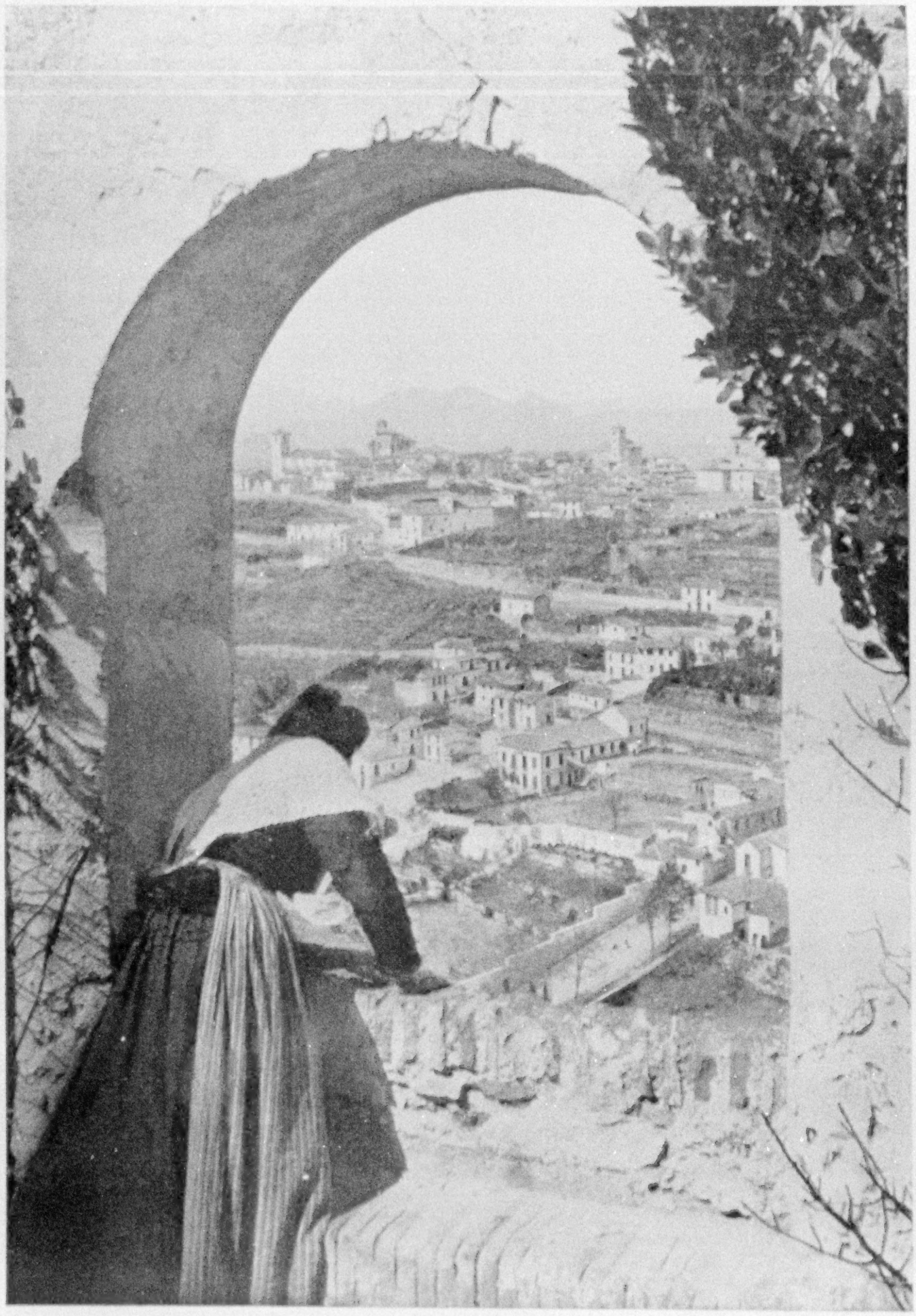

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A GLIMPSE OF GRANADA FROM THE SUMMER PALACE OF THE MOORS

In few periods of their history since the Dispersion have the wandering Jews found such cities of refuge as those of Spain in the days of the Moors. There they developed poetry, science, literature, and art. They became ministers of the government and its representatives abroad (see pages 5 and 7).

they fled, many of them, to Holland, where they engaged in trade and where, after a time, they resumed their relations to the synagogue.

Their skill in international trade and familiarity with colonial matters soon gave them wealth and standing among the Dutch. Charles II while in exile dealt with these Jews. At the same time, one of them visited Cromwell in 1655 and pressed upon him the wisdom of allowing the Jews to return to England, whence they had long before been expelled.

Cromwell made no formal agreement, but intimated that he would tolerate their return, and they went back.

Charles found them there when he was restored, and while they were not politically emancipated in England completely until 1850, they suffered no oppression and were able to develop their faculties for business and finance and were well treated and became a strong and loyal supporting element of the British Crown.

SAFETY IN AMERICA

When the Constitution of the United States was adopted, Jews, of course, were treated on a full political equality. Some of them were of the greatest aid to this country in the Revolution. While there were religious qualifications for suffrage in several of the States, they rapidly disappeared, and in this country, at least since the adoption of the Constitution, in 1789, Jews have had complete emancipation and perfect legal equality of opportunity.

When the French Revolution came on, in 1789, Mirabeau and Abbé Grégoire led the movement for the emancipation of the Jews; and while they met resistance, they were successful.

Napoleon did not disturb this condition. On the contrary, he extended it and gave equality of civil rights to the Jews in many countries over which he exercised power, though he was the author of at least one restrictive ordinance affecting them. France may, therefore, be counted as the next nation after the United States to give the Jews complete legal equality.

Louis XVIII, who succeeded Napoleon, continued this freedom for them, though in actual administration, under the influence of ecclesiastics, there was some discrimination against the Jews. When Louis Philippe succeeded, in 1830, his Minister of Education proposed a bill which became a law, providing for the same payment of rabbis and for synagogues out of the public treasury as in the case of the Christian clergymen and churches.

In Holland the Jews were given political and civil equality in 1796. In the British colonies they enjoyed it from 1740, much earlier than they did in the mother country.

PLEADING FOR RELIEF AFTER NAPOLEON'S FALL

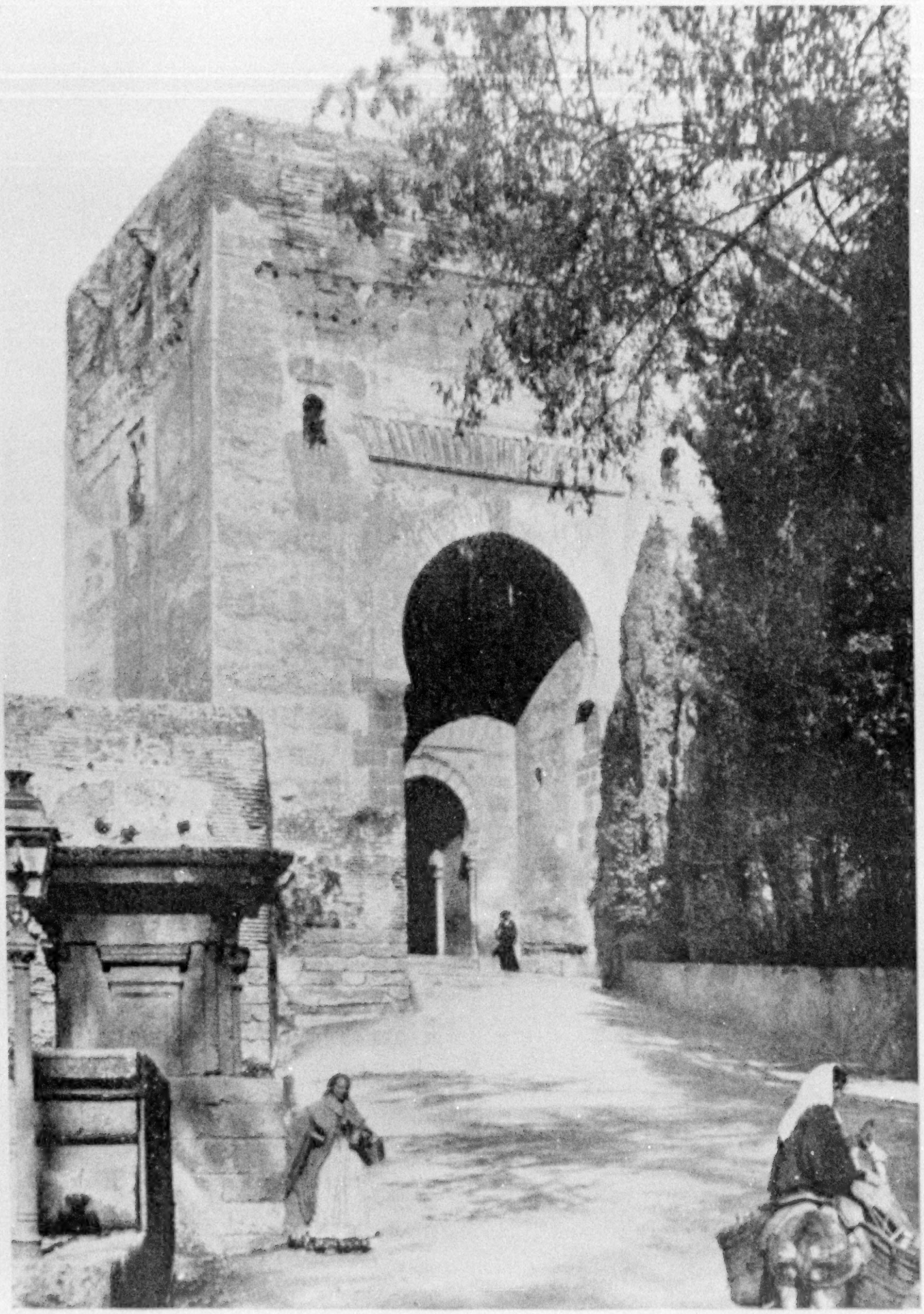
In Prussia the Jews had been given greater civil and political rights in 1812, and in Mecklenburg and in Baden. When Prussia united with England, Austria, and Russia to put down Napoleon, the young Jews of Germany played their part with vigor and effect and made a valuable addition to the Prussian and German forces.

After Napoleon was beaten, in 1814, the Holy Alliance, with Hardenberg and Metternich as leaders, met at Vienna, and the Jewish communities from the Hanse towns and Frankfort appealed for relief from their governments. So bitter, however, was the resistance of the free towns and of Frankfort that only a friendly resolution was passed and inserted in the German constitution, but it had no moral binding effect. The Rothschilds were nearly driven from Frankfort because of the bitterness of the Frankfort Senate and their desire not to grant equal rights to the Jews, although the Jews had paid half a million dollars as a consideration for such a grant.

About this time a professor named Rühs, of the University of Berlin, began propaganda against the Jews and aroused a bitter feeling. The truth is, that Protestant Germany has never been liberal in this regard.

EQUALITY OF OPPORTUNITY PRACTICALLY GRANTED

The popular movements all over Europe in 1848, however, on the Continent brought not only equality of opportunity



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THE GATE OF JUSTICE IN GRANADA: A PHRASE SIGNIFICANT TO SPANISH JEWS

When the Saracens carried the Crescent to the Iberian Peninsula at the beginning of the eighth century, they were accompanied by the Jews who had ingratiated themselves with the followers of Mahomet.

and religious freedom to the Jews, but brought into the various parliaments a number of the leading Jews, and from that time on they have had little real trouble with the law in Austria, Germany, France, Holland, and England.

In Spain the Inquisition was revoked in 1834, and the Jews have since been invited back. By the Congress of Berlin, in 1878, to which I shall refer more in detail later, the Jews secured political and civil equality in Bulgaria and Serbia. Turkey had already granted it to them.

On the whole, then, at the present time, the sons of Israel have little to complain of in statutory law except in Rumania and Russia. This is not to say that they do not encounter social prejudice in all countries, which in some countries has grown into bitter Anti-Semitism and popular agitation against them.

Prejudice cannot be banished by law. It can only fade out as conditions producing it change. It of course affects the happiness and comfort of them against whom it is directed; but it does not limit their useful activities nor the achievements of great success.

WHY ARE THE JEWS PERSECUTED?

What are the reasons for this almost constant persecution of the Jews from the fourth century to the nineteenth? I regret to say that it must be mainly attributed to the religious intolerance of the Christians. Other causes may be pointed out in the characteristics of the race which mistreatment and self-protection either developed or increased and hardened. But, in the last analysis, the initial cause was in religious prejudice.

We find this prejudice in the hostility of Constantine after his conversion; we find it in the bulls of the Popes, beginning in the fourth century and continuing through the Middle Ages to the Council of Trent, in 1563; we find it in the course of St. Louis of France; we find it in the religious frenzy of Queen Eleanor of England, of Elizabeth of Russia, and Maria Theresa of Austria; we find it in the Inquisition in Spain; we find it in the words of Martin Luther against them.

Luther said: "Why should the Jews complain of their captivity among us? We Christians suffered persecution and criticism at their hands for nearly three hundred years, so that we might complain that they took us captives and killed us, and to this very day we know not what devil brought them into our land. We did not bring them from Jerusalem. Besides that, no one keeps them. The country and the roads are open to them. Let them return to their own land. We will gladly give them presents if we can be rid of them, for they are a heavy burden upon us, a plague, a pestilence, a sore trial."

FORCED TO MAINTAIN THEIR EXCLUSIVENESS

We find the same spirit of religious persecution in the reintroduction by Pius VII of the Inquisition against the Jews and his ordinance that the Jews should forfeit the freedom enjoyed under the first Napoleon's rule in Rome and forsake their beautiful houses and return to the Ghetto; and we find it today in the attitude of the Russian Greek Church and the severe methods adopted to secure the baptism of the Jews.

The persecutions which this religious prejudice has engendered have stimulated the Jews in self-protection to maintain their exclusiveness, to continue their religious life and rigid adherence to their ceremonials, and to avoid assimilation with such an uncomfortable and hostile environment.

It increased their intense activity, their cunning in business, in order that they might live at all against such opposition, and it produced in them the traits that are now made the basis for denouncing them.

In 1877, Russia declared war against Turkey because of the atrocities committed by the Turks against the Christian peoples in the Balkans, and ultimately won the war. She made the treaty of San Stephano with Turkey, and then the great Powers insisted that there must be a congress to revise that treaty.

RELIGIOUS AND CIVIL LIBERTY URGED

The congress was called at Berlin in 1878 and under it were established the separate governments of Serbia, Bulgaria, and Rumania, who thus really owed their freedom to Russia.

XUM

RUSSIAN HEBREW ORPHANS ARRIVING IN NEW YORK; THEIR PARENTS WERE SLAIN IN KISHINEFF POGROMS

Before the world war upset all census figures, it was estimated that there were more than 15,000,000 Jews. Of these, 6,000,000 were to be found in the ten provinces of Russian Poland and in the fifteen provinces called the Pale of Settlement, in Russia proper

France, England, and Germany insisted that the new governments to be constituted should embody in their constitutions a declaration in favor of religious and civil equality for all domiciled within their jurisdiction.

This was not favored by Russia and was very bitterly opposed by Rumanians. Nevertheless, on the approval of Prince Bismarck, who presided in the congress, the treaty required that, as a condition of recognition by European governments, the constitution of Rumania should contain declarations and guaranties of civil and religious liberty and equality for the Jews, and Russia signed the treaty.

The Rumanian authorities deliberately framed a plan by which to evade the requirement of the treaty. They provided in their constitution, Article VII:

"The difference of religious creeds and conditions does not constitute in Rumania an obstacle to the acquirement of civil and political rights and their exercise."

EVADING THE TREATY IN RUMANIA

They then provided for naturalization and enacted that naturalization could only be granted by a law and individually. It was held by their government that Jews were aliens, although they had been living in Rumania for hundreds of years and had been subject to draft into the Rumanian army and had served as soldiers. In this way they avoided the effect of the constitution upon Jews, and their statesmen openly prided themselves on their acuteness.

By adopting the constitution to which I have referred, the Rumanians procured the recognition of European countries. Since then they have heckled and harried the Jews by restrictions upon their livelihoods, by refusing admission to the elementary public schools of more than 5½ per cent of their number, and in secondary schools of more than 7½ per cent, and in many other ways.

Although this is in direct violation of the Treaty of Berlin, the signatories to the treaty have not thought it best to intervene.

Bulgaria and Serbia complied with their obligations.

THE PALE OF THE SETTLEMENT

The law which required the Jews in Russia to live in the cities of the Pale of Settlement produced a great congestion. They were forbidden to engage in so many trades and callings that their means of livelihood was most limited. They had no political rights and were thus kept excluded from government employ.

They were denied secondary and university education except to the extent of a very small per cent of their number, and they were so hemmed about with police restrictions as to subject them to oppressive blackmail. The result has been that the great majority of them are ignorant, and even before the war at least a third of them were in direst misery and destitution.

There are in the world over fifteen million Jews. Of these, six millions are to be found in the ten provinces of Russian Poland and the fifteen provinces called "the Pale of Settlement." There are upward of 2,250,000 Jews in Austria and Hungary. There are 615,000 in Germany. There are 270,000 Jews in Great Britain, 100,000 in France, 45,000 in Italy, half a million in Asia, 250,000 in Rumania, and there are 3,300,000 in the United States, of whom a million or more live in the city of New York.

The Jews in the United States, down to 1880, did not exceed a quarter of a million, but since the oppression, pogroms, and massacres in Rumania and in Russia immigration has increased to the figures given (see also page 20).

THE GREAT JEWISH PROBLEM OF TODAY

As I have said, in all parts of Europe and America, except Russia and Rumania, legal discrimination against the Jews has largely ceased and civil equality is accorded them. The present great problem, therefore, is to secure civil equality for them in Russia and Rumania. How is the present condition in those countries explained?

Prince Gortchakoff in the Berlin Congress described the Russian and Rumanian Jews as a great scourge upon

IN FRANKFORT-ON-THE-MAIN, THE ANCESTRAL CITY OF THE ROTHSCHILDS, THE MOST FAMOUS FAMILY OF FINANCIERS IN THE WORLD

Mayer Anselm Bauer, the founder of this family of Jews, was the son of a small merchant. The boy became a money-lender instead of a rabbi, as had been planned, and from the counter of the sign of the "Red Shield" (Rothschild) there developed a financial institution which became more powerful during the nineteenth century than any monarch in Europe. It was Rothschild's gold which enabled Britain to carry on the Napoleonic wars, and it is said that the English Rothschild was present at the Battle of Waterloo to witness the triumph of Wellington.

any people. Bismarck's answer was that the policy of restriction had given them the character which is now made the basis for complaints against them.

Mirabeau in the French Assembly said, in answer to a similar charge: "If you wish the Jews to become better men and useful citizens, then banish every humiliating restriction, open to them every avenue of gaining a livelihood. Instead of forbidding them agriculture, handicrafts, and the mechanical arts, encourage them to devote themselves to these occupations."

RUSSIA'S PLAINT AGAINST THE JEWS

It is probably true that the Russian Jews do devote themselves to trading in money, and that the Russian moujik is subject to abuse in this respect of which the Jews take advantage, but it must be borne in mind that the restrictions upon the Jews as to livelihood have been and are such as to drive them into money-lending. Indeed, this cause dates from the middle ages, when, as already said, canon law forbade among Christians the lending of money on interest and left that business open for the Jews, who perforce became the money-lenders of Europe.

The few avenues of employment for Jews forced them into the conduct of inns and the selling of liquor. This, as I have pointed out, was a heritage from the Polish nobility.

Even if the charge made against the Russian Jews of fraud and trickery has

foundation, it is not to be wondered at, when man's hand is against them, when they are desperate in their efforts to live, when they have a faculty in trade born of the severest necessity. The objection to them that they work together in the interest of each other may well be true. When general society is against them all, they naturally stand together for self-protection and for self-support.

THEY MAKE GOOD SOLDIERS

One can hardly expect that they should feel entirely grateful to a government which makes life so hard for them, or that the desire to serve in the army should be strong in them. And yet the reports from the World War indicate that they have made good soldiers, and the history of the Jews in all countries in which they have settled has been that they have rallied to the support of the government under which they lived.

Their patriarch, Samuel of Nehardea, sixteen centuries ago laid down the rule: "The law of the government is the law"; and in the eighteen or nineteen centuries in which the Jews have been wandering over the face of the earth, rebellion and treachery to the government under which they lived have not been frequent among them.

A number of them in Russia under the old régime doubtless had revolutionary and subversive tendencies, apparently confined to Jews of university education, who found difficulty in earning a livelihood under the restrictions and who naturally cherished resentment.

With their active minds, with their genius for trade, cultivated by centuries of necessity, they prefer trade to manual pursuits, but many of them are skilled artisans in many countries.

DENIED EDUCATIONAL PRIVILEGES

They do not follow agricultural pursuits because they have long been forbidden to own land, and by this long deprivation their tastes have been formed for city life. They have been cooped up in ghettos of the city and, perforce, have formed the habits of an urban population.

Denied the opportunity for education, they are ignorant; but no people in the world manifest so much anxiety to secure education and improve the opportunities when offered with such earnestness and success.

It cannot be good for a country like Russian Poland and the Pale to continue 6,000,000 of its inhabitants in such a persistent condition of poverty and demoralization. It must interfere with the proper development, prosperity, and health of the rest of the population. So large a congestion of this kind must make a sore spot in the economic, political, and social life of this part of Russia.

In spite of their deplorable condition and the immigration it stimulates, the Russian Jews are very prolific and their number is not diminishing. Their presence in Russia has been a continuing fact and the policy pursued in respect to them up to the Revolution did not remove it or alter it and it was not a success.

In aid of the Christian peoples of the Balkans and Armenia, the Russian Government did a great work, for which those peoples should be very grateful. The conduct of Russia toward them was in marked contrast to its attitude toward the Jews within its own jurisdiction. Is it too much to hope that the drastic experience of this war may lead Russia to a different view?

A BLESSING IN DREADFUL DISGUISE

If the war does help the Jew, it will indeed be a blessing in dreadful disguise. One-half the Jews of the world have had to bear its miseries, its cruelties, its sufferings. They lived in the theater of war between Russia and Germany and Austria. In this region, almost without ceasing, the campaign continued. The Russians laid waste the country in order to embarrass their pursuing enemies, and between the two armies the population, of which the Jews were a large part, suffered untold horrors.

As soon as the war came on, as soon as mobilizations were initiated, Germany and Austria, on the one hand, and Russia, on the other, vied with each other in a cultivation of the good-will of the Poles and the Jews.

Russia promised that an autonomous

Poland would be created from all three of the incomplete tribal districts of the partitioned kingdom. Some of the leaders of the Austrian Government announced an intention of giving autonomy to Galicia.

When the war came to an end, tremendous governmental changes occurred in the countries where the Jews are so greatly congested (see also page 23).

The dreadful destruction of life, the necessity for rehabilitation of these countries where the war raged with such violence and destruction, must necessarily give greater economic value to every man who survives. The loyalty which the Jews have shown to their respective governments in these countries under a most trying ordeal ought to impress their governments with the claim that they make to equal treatment.

While it is true that in the past much of the cruelty to the Jews has been immediately prompted by popular prejudice, nevertheless it is also true that, with the increase of popular control in all countries, their condition has ultimately been much improved. A war like this, which must be carried on by the people, increases their ultimate power.

REPRESSIVE MEASURES ALWAYS HARMFUL

Harsh and repressive measures have not helped the solution of the Jewish question. The result reminds one constantly of Æsop's fable of the contest between the wind and the sun in removing a man's coat from his back. The harder the wind blew, the closer the man held the coat to his body. It was only when the sun with its warm rays increased the temperature and created discomfort that the man removed his coat.

The harshest persecution and injustice merely strengthen the peculiarity of the Jew in his adherence to his ancient customs, in his exclusiveness, in his use of cunning to avoid outrage, and in his adherence to his religion and its ceremonials. Give him the sunlight of freedom and the balmy encouragement of equality of opportunity and he assimilates himself to his environment with all the quickness of perception, all the energy, all the enterprise, all the persistence with which he is so remarkably endowed.

If education and opportunity and freedom and equality are extended to them in the next generation, the traits to which objection is made will become less and less conspicuous, and Russia's great domain, which needs people of energy, people of keenness, people of enterprise, people experienced in trade, people of financial genius, will find a benefit in the presence of the Jews.

JEWS IN UNITED STATES

From the East End of New York and through centers of population in this country where Jews are gathered, by the million and hundreds of thousand, come the youth of the race who soon manifest a spirit of Americanism and get on.

They succeed in trade, they succeed in the professions, they succeed in business, and they move their homes to less crowded districts and acquire all the taste and views and fashions of their fellow-countrymen.

They cultivate little or no solidarity in politics, and they manifest a disposition to disintegrate as a community. They retain a loyalty to the race, but not a strict adherence to the ceremonial, and they intermarry with Gentiles.

A number of modern books written by Jews deplore this fact. They fear that Israel will be swallowed up in the nations. They are an excellent, law-abiding part of our population. Of course, criminals come from among them, poor and miserable as some of them are, but the criminal statistics do not show their percentage of criminals to be as great as that of the entire population.

When we consider the congestion in New York in the East End of one million Jews, and that this has come within the last thirty years, it seems remarkable that it has not given more trouble to our civilization and our government than it has. These are the lessons which an investigation by Russian statesmen into our experience would furnish.

STRENGTH OF THE JEWISH CHARACTER

The Jews of the world, in countries where they have had equal opportunities, have won their way not only to great financial power, but to places of commanding influence in journalism, in the

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ESTHER

Even in the days of Ahasuerus, who ruled "from India even unto Ethiopia," the Jews were objects of persecution; but they found deliverance at the hands of Esther, the niece of Mordecai, who not only was "fair and beautiful," but courageous and resourceful. The story of this Jewish heroine, aside from its religious significance, is one of the most appealing in all literature.

XUM

Photograph by A. F. Sherman

A RUSSIAN JEW AT ELLIS ISLAND, NEW YORK

Up to the time of the overthrow of the Romanoffs, the Jews of Russia were required by law to live in the cities of the Pale of Settlement. This restriction was one of the many causes for the influx of Jewish immigrants to our shores.

Photograph by A. W. Cutler

A TOWEL MERCHANT OF THE EAST SIDE: NEW YORK

New York's East Side is a veritable mine for curious and interesting sights. We see here one of the curb merchants, whose specialty is towels, taking a few minutes of much-needed rest on an old soap box. There are 3,300,000 Jews in America, most of them arrivals since 1880 (see pages 17 and 20).

professions, and in business. They have retained always an acute interest in the welfare of their coreligionists throughout the world. Their religious training has inculcated in them the duty of charity to all—Jew and Gentile—and they have given unsparingly to aid their brethren in distress.

Individuals like Sir Moses Montefiore have given much time, money, and effort all over the world to the cause of their race. Baron Hirsch and Baron Rothschild have planned and carried through rural colonies of the Jews in Palestine, in Argentina, and in Texas.

The Zionist movement to secure a migration of Jews back to Jerusalem does not meet with the undivided support of the Jewish people, but it certainly has substantial strength as one project for relief of the congestion in east Europe.

During the World War the Jews of this country and elsewhere raised a fund of nearly $25,000,000 with which to aid their poor peoples suffering in the train of the war.

In the countries where they have money, power, and influence, great Jewish committees have long been organized to help in securing civil rights, religious freedom, and equal opportunity for the oppressed of their race.

The influence of the leaders of the Jews in Europe and America upon the Congress of Nations at Paris in behalf of the better treatment of the Jews has been weighty and we can be sure that it was courageously and wisely exercised.

The direct interest we have in the Jewish question in these Eastern countries was stated by Secretary Hay to the signatories of the Berlin Treaty in protest against Rumania's persecutions and breach of her treaty obligation, to wit, that we are the world's refuge for such people, driven out by measures of oppression and restriction, and their coming in great numbers in their present condition imposes an unfair burden upon us.

We may rejoice that more than half the members of this great race have won their long progressive struggle for merely an equal chance with other men; but we cannot tear out that distressing page in the history of Christian civilization containing the record of seventeen centuries of persecution.

THE JEWS IN THE NEW STATES TO BE PROTECTED

The result of the war and the breaking up of Russia and the giving reign to the principle of self-determination of racial units have created seven independent European States in central and eastern Europe. Of these, the Baltic Provinces, Poland and the Ukraine, as well as the Czecho-Slovak State and the Jugo-Slav State, have many Jewish citizens. In addition to this, the Greater Rumania, which is to receive Transylvania from Hungary, is another State which will have many Jewish citizens.

The German treaty specifically provides that the five great Powers shall make future treaties with Poland and with the Czecho-Slovak State securing the religious liberties of the people who constitute a minority in those States; and it is understood that similar provisions are to be included in the Austrian treaty in respect to the Jugo-Slav State and Rumania.

It is to be hoped that the securities exacted in these treaties will be of a character more effective than were the requirements of the Congress of Berlin in respect to Rumania. Indeed, we can be sure that they will. The prejudice against the Jews still remains in those countries, and cannot of course be eliminated by mere legislation. But Jews can be given equal rights and be protected in those rights, and secure the equality of opportunity through such protection.

The League of Nations is to be a continuous body and will have power enough to see to it that treaties of this character are performed by nations which the war has in fact created and which will continue to be dependent for some years upon the League for their own integrity and independence.

XUM

A MAP OF KOREA: THE REGION TRAVERSED BY MR. ANDREWS' EXPEDITION (SEE ACCOMPANYING ARTICLE) EXTENDS ALONG THE UPPER COURSES OF THE TUMEN AND THE YALU RIVERS

EXPLORING UNKNOWN CORNERS OF THE "HERMIT KINGDOM"

By Roy C. Andrews

Author of "Shore-Whaling: A World Industry"

With Photographs by the Author

ALTHOUGH Korea has a civilization extending nearly 4,000 years into the past, many of the natives in the north have never seen a white man. They are living among the hills today much as did their ancestors centuries ago, worshiping mythical gods in the rocks and trees on every mountain-top, keeping their women in semi-slavery, and dying in ignorance that beyond the narrow confines of their own peninsula lies a world replete with undreamed of wonders.

Wrapped in the mantle of Oriental seclusion, for centuries Korea successfully guarded the secrets of her mountains and her people; but at last the clamor of foreigners at her doors could no longer be stilled, and she yielded reluctantly inch by inch, although realizing that the foundations of her weak government were crumbling beneath her.

It was in 1882 that the first treaty with Korea was signed by the United States, and foreigners took up their residence with official sanction at Chemulpo, the seaport of the capital, Seoul. Even with this foothold in the new country the unwelcome visitors pushed their way but slowly into other parts of the kingdom, and as late as 1897 only a relatively small portion had been visited by white men.

SECRET OF THE "DRAGON PRINCE'S POOL" DISCOVERED BY MISSIONARIES

After the Russian-Japanese war of 1904, however, when the country was freely opened to foreigners and its railway had been completed, the exploration of the northern part progressed by leaps and bounds, until the only extensive unknown area lay along the north central boundary between the Tumen and Yalu rivers.

This was said to be a region of treacherous swamps, densely forested plateaus, and gloomy cañons—a vast wilderness, treasuring in its depths the ghostly peak of the Long White Mountain, wonderfully beautiful in its robes of glistening pumice. The secret of its summit, where the "Dragon Prince's Pool" lies far down in the ancient crater, had been learned as early as 1709 by two Jesuit missionaries, coming from the north through Manchuria, but the approaches to its base from the south and west in Korea had never been traversed by a white man.

Its zoölogy, except by inference from that of remote surrounding regions, was less known than its geography, and this led the American Museum of Natural History to send an expedition to make a study of its fauna.

JAPAN AIDS THE AMERICAN EXPEDITION

Before any non-resident foreigner can go into the interior, permission must be obtained from the Bureau of Foreign Affairs at Seoul, for the Japanese insist on knowing the "reason why" for the visits of all foreigners to the remoter parts of their newly acquired possession. The Museum's expedition was given the enthusiastic support of the government, however, and was furnished with one of their official interpreters, a Japanese who spoke Korean, Chinese, and a little English. A Korean cook who knew some English was also engaged, and developed into a valuable assistant after he had become convinced that he was not the leader of the expedition.

At first he was the source of endless trouble; for, like all Koreans, he saw in his position as "man of all work" an opportunity for extensive graft. He began by affecting an extraordinary aversion to Japanese food and begging money for

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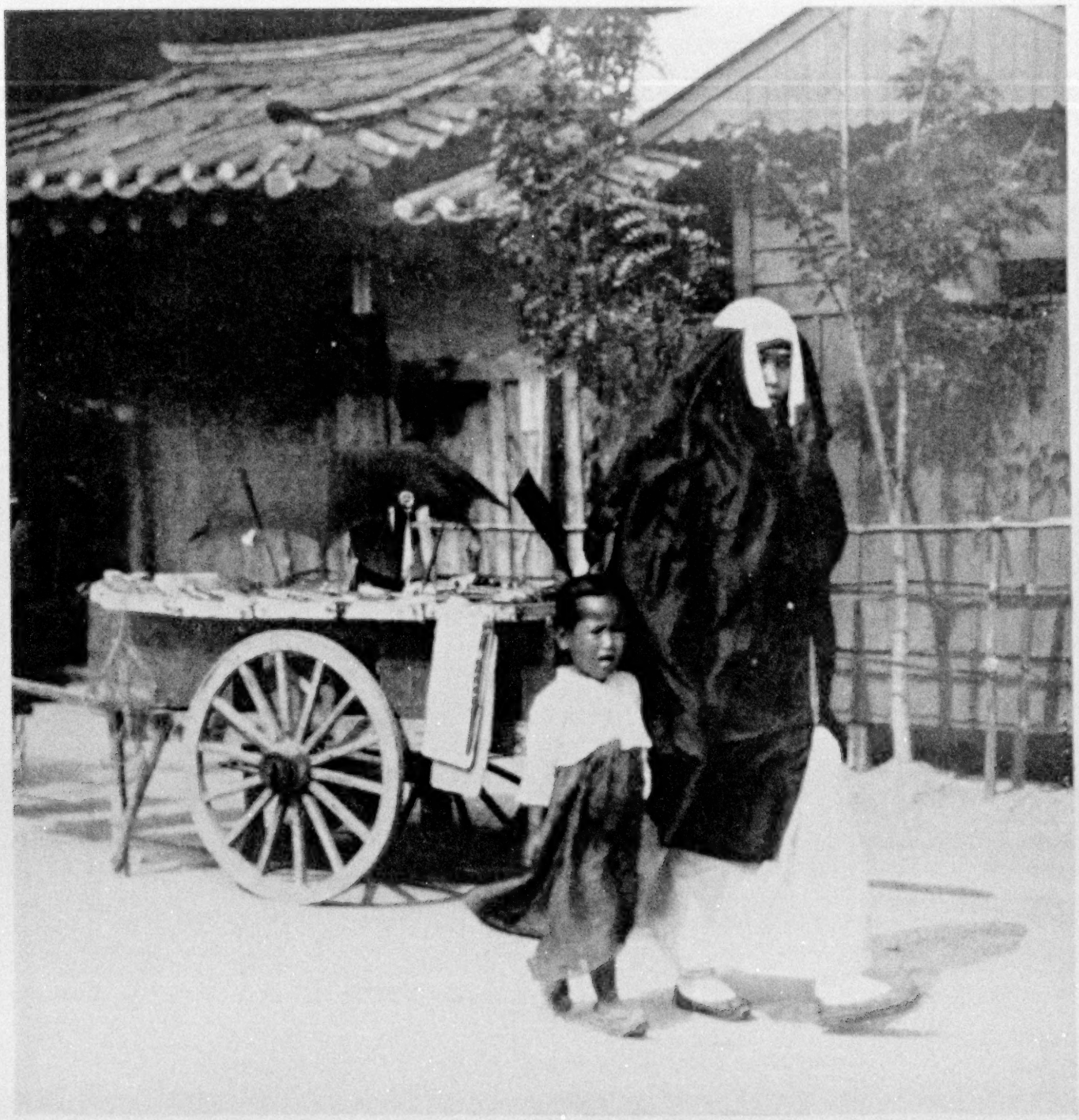
A MAN AND A BOY: THE MAN (MARRIED) IS 11 YEARS OLD, THE BOY (UNMARRIED) IS 47

The man's wife is ten years of age. While they are legally married, they continue to live with their respective parents. The unmarried "boy" is not allowed to "do up" his hair or wear a hat during the years of his single unblessedness (see page 33).

THERE IS A SUGGESTION OF MOHAMMEDAN MODES IN THE STREET ATTIRE OF THESE SEOUL WOMEN

While a white, green, or red combination cloak and veil is obligatory on the street, the Korean woman of the middle class affects bright, solid colors in her home. The women of the wealthy class go from place to place in the seclusion of curtained chairs borne by coolies.



OUT FOR A STROLL IN SEOUL

Women of the middle class in Seoul invariably wear for their street costume either a white, a green, or a red long coat over their heads like veils. The garment reaches to the knees (see also illustration, page 26).

Korean "chow," continued by annexing a relative as camp-follower and general parasite, but ended abruptly when I caught him paying for some vegetables and pocketing half the money himself. He made an excellent football for some moments afterward; but the medicine, although severe, effected a complete cure, and from that day to the end of the trip "Kim" was my devoted slave.

He was a quaint little fellow and very amusing. One day I asked him if he was a Christian and he replied, "Yes, some times. It takes plenty time to be Christian. When I got no work, then I be Christian, but when I have good job then I no chance for waste time in such silly things." And I am afraid that Kim's attitude is that of many other Orientals, where western religion is concerned.

I talked with him often about the early history of his country, in which he was well versed, and once asked him if the Koreans liked the Japanese and the new rule. He looked up very solemnly and said, "I tell you, Misser Andrews, when Japanese near by, then Korean say

XUM

A FERTILE VALLEY IN THE VICINITY OF THE CAPITAL CITY OF SEOUL

Korea is about as large as New York and Pennsylvania combined, but the arable land comprises only about one-fourth of its area. A range of barren mountains and scantily clad hills extends throughout the entire length of the peninsula.

he like him because he must, but way down in his stomach he no like Japanese at all."

NO ACCOUNTING FOR KOREAN TASTES

Our expedition landed at Chon Chin, or Seshin, as the Japanese call a little village on the northeast coast about 150 miles south of Vladivostok.

The first part of our journey on an interesting little railway, up which we were pushed on hand-cars, was along the seacoast, where the native fishermen were bringing in great nets full of "men-tai." This fish is used as a basis for a favorite dish of the northern Koreans, called "kimshi," which is made from onions and garlic, a whitish doughy substance, a plentiful supply of red pepper, and a little water. A fish which has reached an advanced stage of decomposition is added and the mess placed to one side to ripen. After several days it is generally considered to be "high" enough for the most discriminating epicure.

From the old walled town of Puryon we were pushed up the railway to Muryantei and spent the night there in a Korean "hotel." It was my first experience and one which I shall never forget, for the ordinary house is inhabited by an extraordinary variety of insect pests. Lice, bed-bugs, fleas, cockroaches, and spiders literally swarm under the matting and over the walls, making the night unbearable to any one save a native. I had a folding canvas bed, but the insects crawled up its legs, and after further experience I learned that the only way to rest comfortably in a native house was to spread a circle of insect powder about the cot, get inside a sleeping-bag, and pull the cover tightly over my head.

Structurally the huts are interesting, for the Koreans have anticipated our hot-air furnace by many hundreds of years

THE KOREAN PEASANT WOMAN'S NECK MUSCLES ARE AS WELL DEVELOPED FOR BURDEN-BEARING UPON THE HEAD AS ARE THOSE OF THE SOUTHERN DARKY

The man of the family usually prefers to do his bit between his shoulders, his load being strapped to a bamboo rack (see illustrations on pages 32 and 44).

Every house is raised a foot or two above the ground, and a wide flue runs beneath the floor, emerging at the other end in a tall chimney, made in the north from a hollow log. When a fire is built at the entrance to the flue, the smoke and heat are drawn beneath the house, keeping the rooms warm during even the coldest days of winter (see page 38).

At Muryantei we left the push railway and, with our equipment piled in three creaking bull-carts, proceeded westward toward Musan, the largest town in northeastern Korea. The valley up which we traveled was extensively cultivated, and with its two rows of telephone and telegraph poles along the road presented an astonishingly occidental appearance. Except where a group of picturesque, thatch-roofed huts nestled into the hillside or strung themselves along the edge of a streamlet, there was little to suggest that we were not among the foothills of Montana or Wyoming, in my own country, 10,000 miles away. It was most disappointingly civilized, but interesting withal

THE KOREANS OF THE NORTH DRESS MUCH LIKE THEIR BROTHERS AND SISTERS OF THE SOUTH

The men wear loose, baggy trousers tied at the ankle, short jackets, long, flowing kimonas, and the peculiar horse-hair hats which are the pride of every Korean's heart and are worn both indoors and out by the married men only.

Musan was reached in two days, and it was a revelation. Here, on the very edge of Korea, lies this wonderful ancient city, its grim old walls bearing five centuries of history. It was like stepping backward to another world, into a story of the Arabian Nights. I was enchanted and wandered about the half-ruined buildings, reading fascinating bits of history from the faded inscriptions and public monuments, forgetting for the time that my mission called me farther.

A TIGER HUNT IN THE KOREAN MOUNTAINS

Few white men have been fortunate enough to wander inland to the gates of this ancient city. During the Russo-Japanese war several Russians took refuge there, and since then a half dozen foreigners have discovered it; but, except for these stragglers, Musan lies unknown to the western world. The great central palace, or reception hall, remains intact, and close by, in partial ruins, is the temple guest-house. The smaller public buildings, the gates, the watch-towers, and, most of all, the walls themselves, each one has its own peculiar fascination, telling its own story or adding a chapter to that of its neighbor.

A company of Japanese gendarmes is stationed in the old military quarters of Musan, and the commander, Lieutenant Kanada, showed us the greatest kindness. At the time of our arrival the town was much excited over two tigers that were on a mountain some 12 miles away, at the little "village" of Hozando, and we spent nearly three weeks hunting there.

These northern tigers are splendid animals, more beautiful than their relatives

of India or the Malay Peninsula, and range among the bitterly cold mountains of China, Korea, and Manchuria, far up into Siberia.

DRINKING HOT BLOOD AS A TONIC

On the first day's hunt at Hozando a deer was shot. The bullet, passing through both lungs, filled the thorax with clotted blood, and as soon as the animal was opened Paik, my Korean gun-bearer, plunged his face into the half-liquid mass, drinking and eating until the last drop was gone; then removing the steaming red liver, he cut it into slices, swallowing them as fast as possible.

I was tremendously surprised, but learned afterward that the Koreans believe the blood of a deer or any wild animal, if drunk when warm, to be a splendid tonic. Tigers' claws, whiskers, bones, and teeth are especially valuable, and preparations made from these materials were often given to soldiers before a battle or any especially hazardous enterprise, since they were believed to inculcate great bravery.

AN IMPOSING CAVALCADE

When we returned to Musan to prepare for our trip into the wilderness, trouble began. It was almost impossible to procure horses and men, because of the fear of the Chinese robbers, who were said to range along the borders of the forest. My party were demoralized, and had it been possible to procure any "tiger-bone tonic," they would have been given a liberal dose; but none was to be had, and it was only after strenuous and forcible efforts by the gendarmes and myself that we finally got away, with six horses and five *mafus* (drivers), besides my cook, interpreter, and gun-bearer. We made rather an imposing party, but the hearts of the Koreans were heavy and their spirits at lowest ebb.

Our objective was the little village of Nonsatong, just at the edge of the unexplored wilderness, 40 miles away. The first portion of the journey lay over the picturesque hills above the Tumen River, which forms the northeastern boundary line between Korea and Manchuria, and when we were well upon the mountain slopes the view was magnificent. Far below us were oat and millet fields and villages of tiny, dirty huts, about which white-garbed natives lounged in the sunshine, smoking their long pipes, or perhaps lazily drove a pair of huge bulls back and forth across a field, dragging after them the primitive wooden plow used by the Koreans of the north.

THE CURIOUS KOREAN WATER-HAMMERS

Everywhere the log water-hammers, made for pounding grain, were rising and falling ceaselessly like things of life. The hammer is constructed from a 12-foot log, one end of which is hollowed deeply, the other being weighted with a heavy post set at right angles to the shaft. The log is so placed that its concave end will rest under a stream which has been diverted to flow in the desired direction, and a tub for the grain is sunk deep into the ground, where the post will fall within it (see page 37).

When the concave portion is filled with water the log rises and the water is tipped out; the opposite end then becomes heavier and the pestle falls into the tub beneath it; thus the hammer alternately rises and falls so long as the water flows. This invention probably came from China and is not found in the southern or central parts of the peninsula.

We had our first sight of forests in Korea when we reached Nonsatong, or Nojido, as the Japanese call it. This is the last settlement on the edge of the wilderness and consists of 10 or 12 small and very dirty huts strung out along a branch of the Tumen Valley.

The inhabitants had never seen a white man, and the curiosity with which we regarded each other was mutual. At first they were inclined to be somewhat shy and contented themselves with standing silently, watching my every movement; but, after learning that I was not averse to being examined, they crowded about for closer inspection of the strange person who had suddenly appeared among them as if from another world.

NATIVES MARVEL AT THE BLUE-EYED STRANGER

They were most interested in the fact that my eyes were blue, and not black, brown, or dark gray, as were their own

XUM

"NICE, FRESH SEAWEED, FINE IN FLAVOR": THE KOREAN COUNTERPART OF OUR FISH-MONGERS, OYSTER CRIERS, AND HOKEY-POKEY ICE-CREAM VENDERS

While the coolie is the chief burden-bearer of this country, the Koreans also make use of a strong and spirited breed of small horses. Men and oxen are employed in the cultivation of the soil, which in the southern half of the peninsula is extremely fertile. On the seacoast the inhabitants depend largely upon the yield of their fish-nets for food.

THIS BOY HAS MALARIAL FEVER AND IS WEARING ON HIS BACK A PAPER ON WHICH IS PRINTED A PRAYER ASKING THAT HE BE CURED

He was not averse to accepting the benefit of western medicine, however. After swallowing a five-grain quinine tablet, he was given five others, with instructions to take them at intervals of two hours. He evidently saw no reason for delaying his recovery, and swallowed the 30 grains at a gulp (see text, page 33).

or those of the Japanese. Although they had heard of the blue-eyed men (Russians) who had come to Musan, one had never been seen at Nonsatong. They were curious to know if I could see well, and in order to test my sight would hold objects at various distances or select a tree or rock a few hundred yards away and ask me to tell them what it was.

As a matter of fact, their doubt as to my ability to see perfectly is not so curious after all. I remember distinctly that when as a boy I visited the "dime sideshow" of a traveling circus and saw an albino man, the first question I asked was whether or not he could see as well as others. My lighter complexion did not cause comment, for many of the Korean women and girls, especially those of the higher classes, have skins almost as white as a European.

While the eye-tests were going on, a dog stopped upon the summit of a hill about 250 yards away, and they asked if I could see it. I said "Yes," and moreover that it could be killed from where we stood. They laughed incredulously, and, since the owner of the dog was not present, suggested that the experiment be tried.

Resting the heavy repeating rifle on a stump, I shot the animal through the fore quarters. The Koreans gasped, and when they saw the dog's body, torn and mangled by the soft-point bullet, their astonishment was ludicrous. It was not a useless sacrifice of canine life, for it inspired the greatest respect for my fire-arms, and, moreover, what remained of the dog was quickly boiling for the dinner of four hungry natives.

DOGS BRED FOR FOOD

Dogs are bred for food, since the Koreans are great meat eaters. At one time they did much hunting; but the Japanese confiscated all fire-arms, and now wild game is caught only in traps and pits. Like all the natives of the interior, the people at Nonsatong are dependent for food upon what they grow. They are much more industrious farmers than the Koreans of the south and raise quantities of oats and millet, but it seems to be impossible to cultivate rice successfully in the Tumen River Valley.

Their dress was like that of the southern natives. The men wear loose, baggy trousers tied at the ankle, a short jacket, a long, flowing kimona, and a peculiar horse-hair hat, which is the pride of every Korean's heart. The hat is always worn in the house as well as out of it, but only by those men who are married and have thus obtained a definite social position in the community.

A "MAN" 11 YEARS OLD AND A "BOY" OF 47

One day when on the way to the Yula River we passed through a village where I noticed a little fellow wearing a hat, with his hair knotted on the top of his head. He was only a child, and I said to the cook, "Is that little boy really married?" "Whom do you mean," he asked, "that man?" pointing to the child.

I said, "Yes," and learned that the little fellow was only 11 years old and had a wife of 10. They were legally married, but were both living with their parents, and would continue to do so for the next two or three years. The boy was referred to as a "man," however, and had all the privileges in the community of a full-grown member (see page 26).

Near the "man" was a fellow of 47 wearing his hair parted in the middle and hanging in a long braid down his back. He was unmarried, could not wear a hat or tie up his hair, and would always be considered a boy, no matter what age he reached. The two were photographed side by side, to the great displeasure of the 11-year-old-man.

When we first arrived at Nonsatong one of the natives was ill with malarial fever and came to my camp in a pitiable condition. Just under the collar of his jacket he was wearing a slip of paper on which was written a prayer petitioning the god of the valley to bring him health again. I gave the boy a five-grain tablet of quinine, telling him to swallow it at once, which he did. I then wrapped five other tablets in a bit of paper and told him to take one every two hours; but hardly was my back turned before he swallowed all five at once; he thus got 30 grains of quinine in less than 10 minutes.

We spent some time at Nonsatong and found the shooting good. On the fifth

XUM

MAIN STREET IN A TOWN OF NORTHERN KOREA

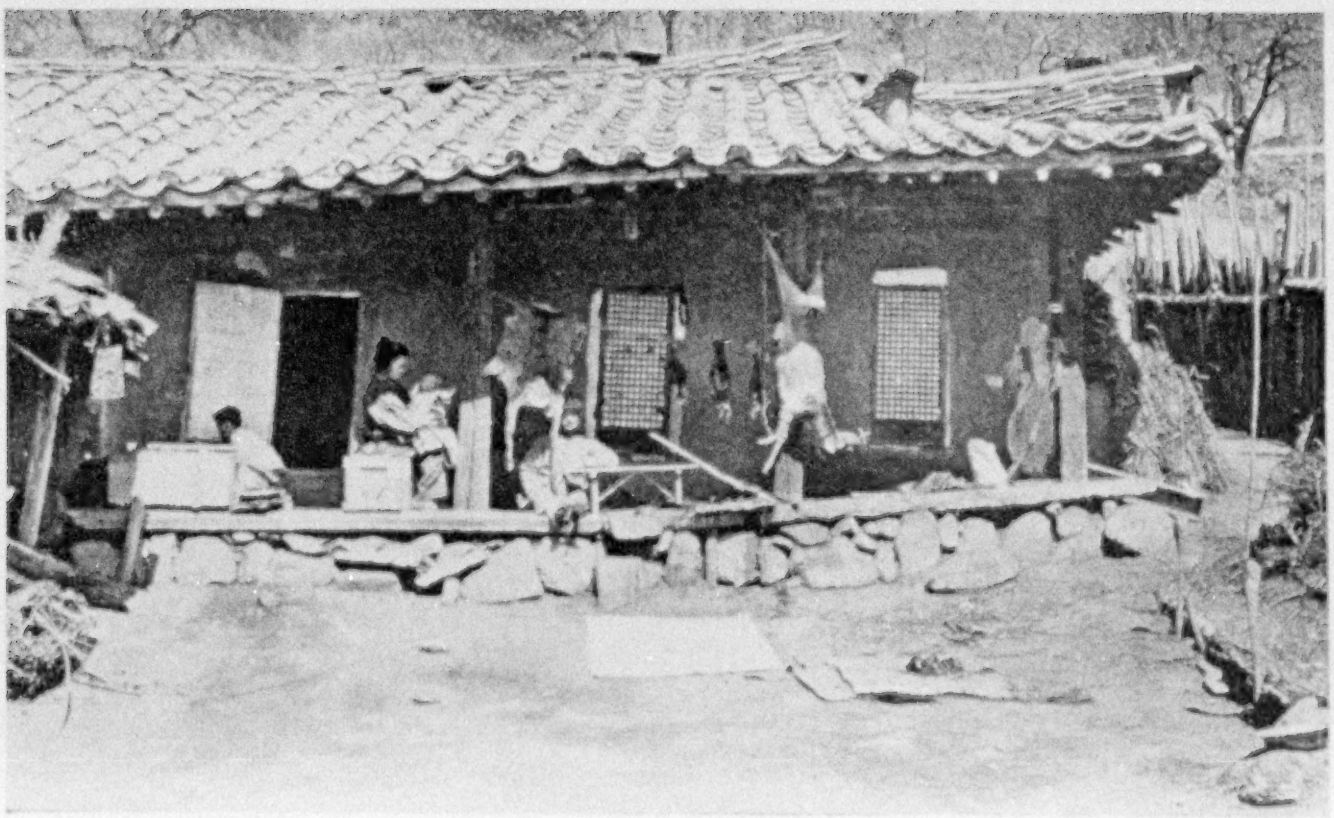
The furrows in the center are combination cart ruts and municipal sewage system. Except for the occasional thatch-roofed huts nestling into the hillsides or strung along the banks of a stream, a traveler in this part of Korea might imagine himself in the foothills of Montana or Wyoming.

ALL ABOARD ON THE TWO-COOLIE CAR EXPRESS AT CHON CHIN!

The American Museum's Expedition traveled a short distance from this seacoast town on the Push Railway, each little car being propelled by man power. Note the Japanese flags displayed at the door of the station.

THE HUT IN THE MIDDLE DISTANCE WAS OCCUPIED AS A LODGE DURING THE EXPEDITION'S TIGER HUNT

This bleak, snow-covered region is in striking contrast to the dense jungle haunts of the Bengal species of tiger. The Korean animal ranges over the bitterly cold mountains of China and Manchuria far up into Siberia.



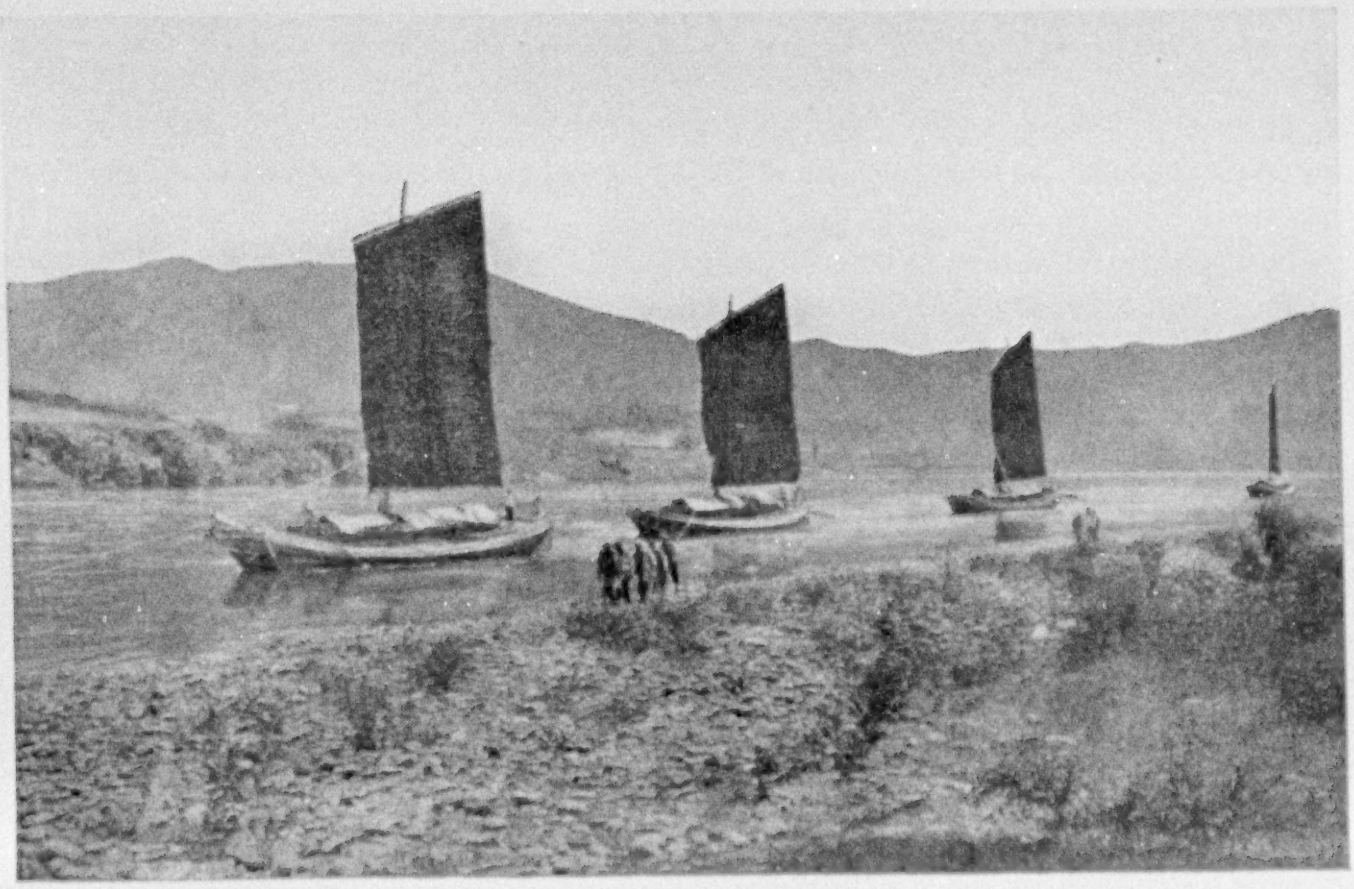
A TIGER-HUNTING LODGE AT HOZANDO

The tigers of northern Korea are magnificent creatures, more beautiful than their jungle-cat cousins of India and the Malay Peninsula (see text, page 30).

XUM

FISHERS OF MEN-TAI

This sea food is captured in vast quantities by means of nets. When the fish has reached an advanced stage of decomposition, it forms the basis of a favorite Korean dish called "kimshi," which, when seasoned with onion, garlic, and red pepper, is a rare delight for the Korean epicure.



CHINESE DRAUGHT MEN TOWING JUNKS UP THE YALU

The huge brown sails do not supply sufficient motive power to overcome the swift current of the stream. From seven to eight weeks are required to tow the boats from the west coast to the head of navigation, and only one and a half round trips can be made in a season before winter sets in and ice blocks the stream (see page 48).

AN HYDRAULIC HAMMER À LA KOREA, USED IN POUNDING GRAIN

This crude but effective mechanism for utilizing water-power is believed to have been borrowed by the natives of northern Korea from the Chinese. It is not in use in the southern portion of the kingdom. The log is hollowed at one end, and into it a stream of water runs. When the end of the log has become full of water it tips up, the water runs out, and the log falls, pounding the meal (see photograph below).

THE HAMMER AS IT RISES FROM THE MORTAR (SEE TEXT, PAGE 31)

XUM

THE KOREANS HAD HOUSES HEATED BY HOT-AIR FURNACES LONG BEFORE WESTERN CIVILIZATION THOUGHT OF SUCH A CONVENIENCE

Each house is raised a foot or two above the ground and a wide flue runs beneath the floor, emerging at the other end in a tall chimney made from a hollow log. Even though the houses are poorly constructed, this method of heating is effective in the severest weather.

day, when returning to camp from the usual morning hunt, we came upon seven men from the village kneeling at the base of a great rock bearing a larch tree, in front of which they had placed brass dishes containing nicely cooked chicken and millet, beside several cups of *saké*.

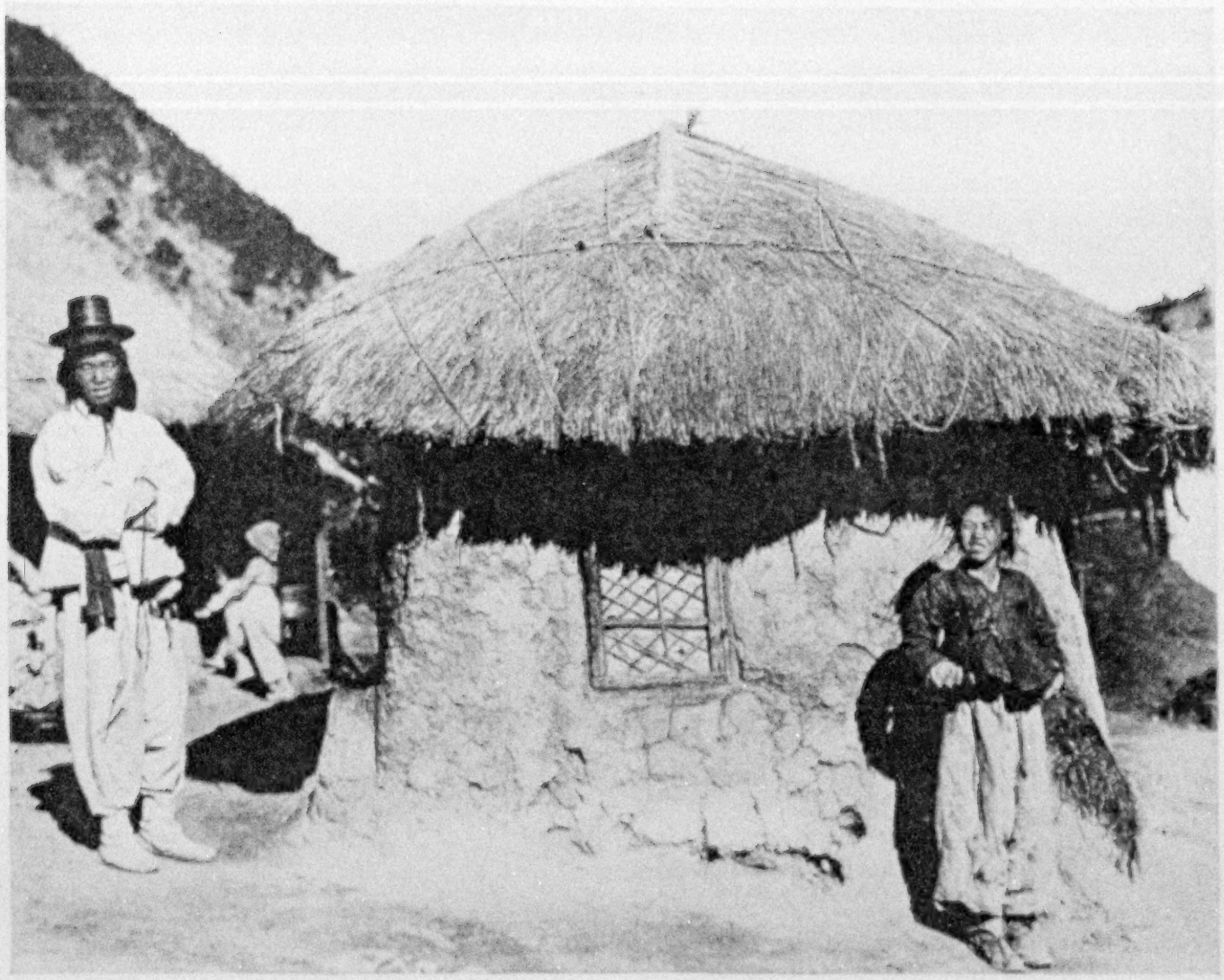
They were making their annual spring offerings to the god of the valley, asking for good crops, fine weather, and the birth of many horses and children. The food had been prepared near by, the dishes having been carefully cleaned and boiled in order to remove all traces of human touch before they were presented to the god.

After the praying was finished I was invited to join in the feast which followed. The interpreter hurried to camp for the kodak, and several pictures were taken during the meal, but we were too late for the opening ceremonies. They said the food could not again be offered to the god, since it had already been tasted by men.

They were greatly pleased because the white *yang-ban* (nobleman) had consented to eat with them, for they believed that their valley would be blessed with unusual good fortune. I have often wondered since whether the old *joss* was as honored by my presence as they thought he would be.

CONTENDING WITH THE TIMIDITY OF NATIVES

When the collecting at Nonsatong was finished, we started early one morning on the trip through the primeval forests to the base of the Paik-tu-san. Our destination was a log cabin, some 14 miles up the Tumen Valley, which had been



THE WALLS AND FLOOR OF THIS TYPICAL NORTHERN KOREA HOUSE ARE MADE OF CLAY; THE THATCH IS OF RICE STRAW

The average native house is an insect incubator. The only way for a westerner to sleep in comfort under such a roof is to draw about his canvas cot a magic circle of insect powder. By covering his head he avoids intermittent showers of fleas and roaches during the silent watches of the night (see text, page 28).

built a number of years before by a Korean hunter. Few of the natives of Nonsatong had been even as far as this hut and only two beyond it. For many years wandering gangs of Chinese and Korean bandits have ranged along the forest borders, keeping the natives in terror and exacting tribute from every caravan which passed through the territory under their control. If the tribute was not paid destruction was certain. The Japanese have now pretty well cleared the country of these marauders; but though few remain the fear of them, inbred in the peace-loving Koreans, will live for years to come.

Our horsemen were reluctant to venture into the forest, and had they not realized that the commands of the Japanese gendarmes gave no alternative, they could not have been forced to go at all. Nearly an hour was spent praying at a little shrine on the edge of the woods, and, with gloomy faces, they followed the half-obliterated trail which led to the log cabin. We traveled along the Tumen River, passing through groves of oak, birch, and larch trees into a beautiful park-like valley covered with long, dried grass. It was hard to realize that before us stretched thousands of acres of unknown forests, through which a white man had never passed.

PLUNGING THROUGH THE PRIMEVAL FOREST

We found the log cabin to be in good condition, although it had not been occu-

MILLINERY FOR MEN IN KOREA

This sedate citizen is not wearing a lamp shade, but an oiled-paper umbrella to protect from the rain his pill-box hat of horse hair perched upon a tightly coiled queue. Note his long pipe.

pied for years, and on the hillside above it was a row of little bark shrines, each of which had been built as an offering to the god of the mountain by a native who had hunted there. My gun-bearer set about the construction of another while the horses were being unloaded, and together we brought a cup of *saké* and a little rice to propitiate the joss.

The hut was on the very outskirts of the dense forest which stretched far away to the northwest up the slopes of the Long White Mountain; but shooting was poor and we left in a few days.

The wilderness became thicker as we ascended the plateau and the oak and birch trees disappeared, giving place to larches, from 60 to 100 feet in height, strung with long gray moss. We saw but few birds and no mammals, and even at night when the traps were set the bait remained untouched.

The silence and the subtle influences of the forest began to work upon the imaginations of the Koreans, and after we had been threading our way for five days through the mazes of an untouched wilderness the natives were discouraged and asked to return. They knew not where they were going or why, except that we were to reach the base of the Paik-tu-san. When we were high upon the mountain slopes the snow had become so deep that it was difficult to proceed, and we made the last camp in a driving storm of sleet and rain which kept us in the tents for two days.

I had heard before leaving Nonsatong of what the Koreans called the *Samcheyong*, "Three bodies of water." The description sounded much like lakes, which were not supposed to exist in Korea, and it seemed well worthy of investigation. My gun-bearer had been at the Samcheyong 18 years previously, when a boy, and I had learned its general location in reference to the Paik-tu-san. It was decided, therefore, to return two or three days' march, strike directly through the forest to the Samcheyong, and make our way to the Yalu River, which could be descended to the west coast.

The Koreans were delighted to turn southward, and after reaching an open glade on the bank of a creek we camped for a few days, trying to trap. We caught

nothing and saw no birds. A few old deer tracks still showed near the stream, but the animals had not been there for months.

WE FIND LAKES FORMED BY AN ERUPTION OF A SACRED MOUNTAIN

When we broke camp and I told the Koreans that we were to go to the Samcheyong, there was an open mutiny, but with considerable difficulty they were persuaded to go on.

I spent two sleepless nights about the camp-fire with the rifle on my arm to prevent the horses being stolen, but the third day we marched into a vast burned track thousands of acres in extent.

A tremendous fire had devastated the forest 10 or 12 years before and left in its wake a cheerless waste of blackened tree skeletons and charred stumps. All day we tramped through this area of desolation, and at night camped on the shores of a beautiful lake 3,700 feet above the level of the sea. We found that there really were three lakes and a long connecting pond between two of them.

They seemed to have been formed by some violent eruption of the Paik-tu-san many years ago, for the basins and shores were of volcanic ash, and my gun-bearer said that if we dug down about 12 feet charcoal would be found. All were circular, the largest about three miles in circumference, and beyond them rose the beautiful white slopes of the Paik-tu-san, the sacred mountain of the Manchus. By building a log raft to enable us to take soundings, we found the largest lake to be about 8 or 10 feet deep, but during the season of rain or melting snow the water would undoubtedly rise greatly. In the center of the lake was a beautiful little island, heavily wooded, with a long sand-spit projecting toward the shore.

I was greatly disappointed upon returning to Seoul to find that the lakes were known to the Japanese. A military map showed them under the Korean name of Samcheyong, and they were probably located either from some ancient Chinese map or from the statements of Koreans. So far as I have been able to learn, none of the foreigners in Seoul or other parts of the country knew of their existence.

KOREA'S SWEET SIXTEEN

The lot of the average woman of the Hermit Kingdom is not an enviable one, as she is kept in semi-slavery by her master. Plural marriages are not recognized by the Koreans, but concubinage has a definite status in their social life, as it has had throughout the Far East for many centuries.

We remained at the Samcheyong for several days and then started to cross the watershed toward the Yalu River. After leaving the summit of the mountain the forest became denser than that near the Paik-tu-san and the trees larger. Great larches stretching up 150 feet were on every side, their trunks and branches covered inches thick with lichens and moss and their bases buried in tangled undergrowth. The ground was soft and wet, and soon we were in a series of swamps which made travel well nigh impossible. The only way in which they could be passed was to cut down trees or drag heavy logs, lay them end to end, and drive the horses over.

LIFTING OUR HORSES OUT OF THE SWAMP

When an animal slipped off the logs and became mired, it would lie quietly in the water until the packs had been removed, and even then make not the slightest effort to extricate itself. Fortunately the horses were small, and with six men lifting at the legs, head, and tail, and the cook shouting with all his strength we could usually get the brute upon the bridge again. During the whole day we covered only six miles, but the swamps were finished.

Two days more of cutting our way through the wilderness and we came into a thin forest, where a broad trail led down the mountain side. Picking our way among huge boulders, which in many places the horses could barely pass, we descended nearly 2,000 feet to the valley below. There, in a clearing just at the edge of the forest, were four log houses constituting the village of Potisan, the first habitations on the Yalu side of the watershed. We remained over night, and the next day crossed another heavily wooded mountain to the village of Potaidon.

WHITE MAN ATTRACTS A MULTITUDE OF THE CURIOUS

Although Japanese gendarmes often come there, the Koreans had never seen a white man, and I was an object of even greater curiosity than to those on the Tumen River side of the watershed. We camped not far away, in a little grove of trees on the bank of the river, and my tent was surrounded by a curious crowd of natives within a very few minutes after it had been pitched. The next day Koreans were coming from every direction to see our camp and the strange man there.

After collecting at Potaidon for some time, we started across the mountains toward Heizanchin, on the Yalu River, the largest city in north central Korea. A good road led over the hills, and upon the top of one we came to a picturesque little temple, where I found a poor old man almost crippled with rheumatism. For five days and nights he had been praying at this shrine, called the "Temple of Good Fortune," asking the god to relieve his sufferings, and, although it had been raining much of the time, the old fellow had been sleeping on the wet ground.

Beyond the temple we descended into a treeless valley where, in one of the huts, a funeral was in progress. A woman had died and the corpse was lying in the largest room of the house, while a great many relatives and friends, all dressed in coarse cream-colored cloth, were sitting about the door and courtyard drinking quantities of strong *saké* and keeping up a continuous monotonous wail. As soon as I appeared the corpse lost all its attraction, and every man in the entire assembly rushed outside to get a look at me, the women alone remaining within to continue the dismal wail of *eigo! eigo!* So long as I remained near the house the funeral was forgotten.

THE PICTURESQUE RUINS OF KOREA'S SENTINEL CITY

The country which we traversed was becoming more and more deforested, and in many places somewhat reminded me of the Egyptian sand-hills near Cairo. There was little vegetation except on a hilltop now and then, where a few trees had been left to shelter a Korean grave. Nearing one of the tributaries of the Yalu River, however, we found the hillsides covered with beautiful flowers. Purple azaleas, buttercups, and violets were everywhere, and, farther on, the banks of a rushing mountain stream

WHEN THE WESTERN TRAVELER PASSES THROUGH THIS SOUTHERN GATE OF MUSAN, HE ENTERS ANOTHER WORLD

Here on the very edge of Korea rises this wonderful ancient city, its half-ruined buildings and crumbling walls bearing the faded inscriptions of five centuries of fascinating history

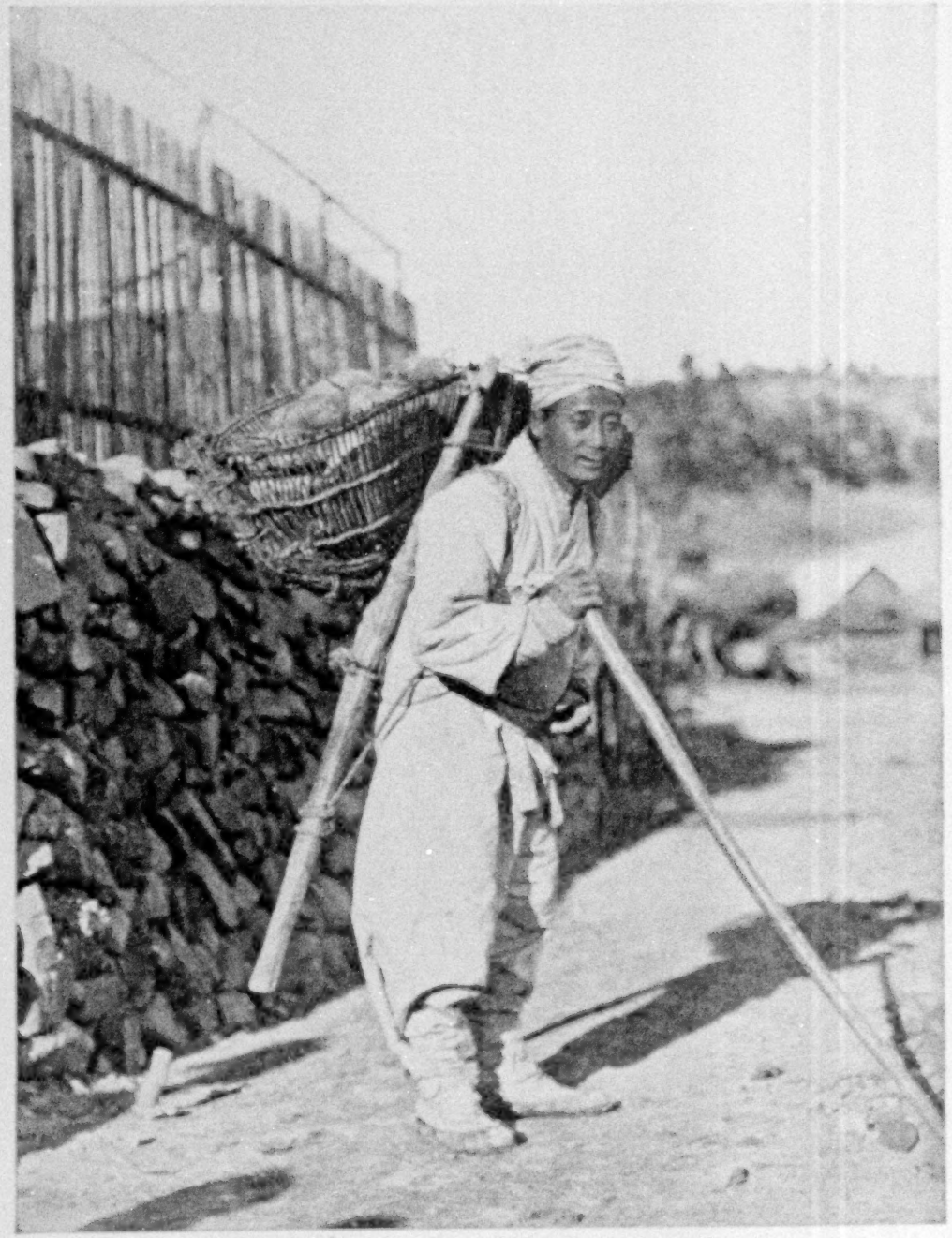
A STUDENTS' DORMITORY AT MUSAN FOR MEN WHO COME TO TAKE THEIR EXAMINATIONS IN THE CONFUCIAN CLASSICS (SEE PAGE 30)

This house, in which they live as guests during the examination period, is five centuries old.

XUM

A KOREAN GUN-BEARER BRINGING IN THE QUARRY

The natives of northern Korea believe that the blood of a deer or any other wild animal, if drunk when warm, is a splendid tonic.



THE HUMAN PACK-HORSE OF KOREA

In the wicker basket attached to his bamboo saddle this native can carry a burden of from 100 to 200 pounds.

XUM

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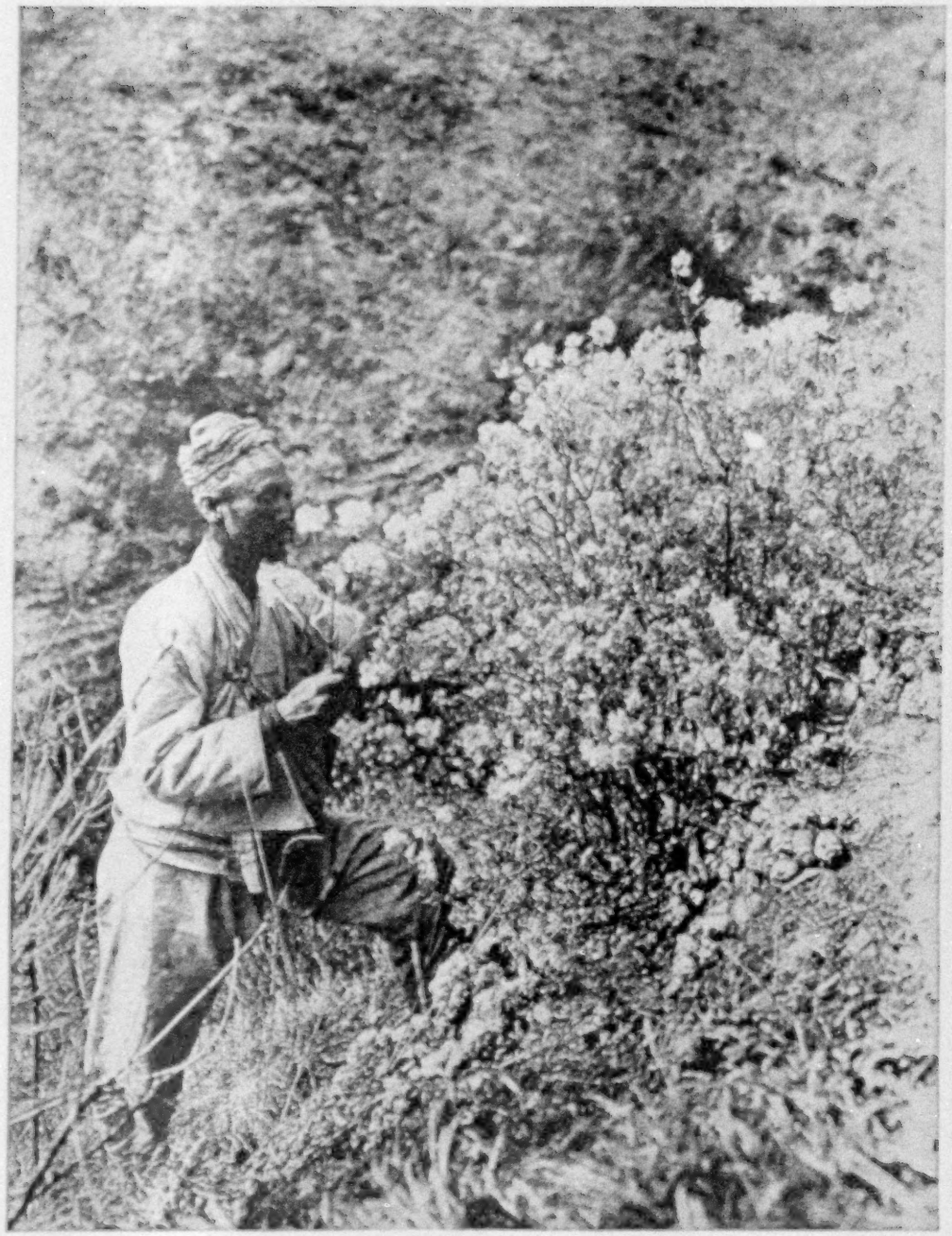

AZALEA-CLAD HILLSIDES WOULD SEEM TO ENTITLE KOREA TO BORROW CHINA'S SOBRIQUET OF "THE FLOWERY KINGDOM"

This beautiful plant, especially popular in America at Eastertide and at Christmas, is a native of the hilly regions of China, Japan, and Korea. It grows in special profusion in the valley of the Yalu.

AS IN THE CASE OF THE CAMEL, WHERE THERE IS A WATER JAR THERE IS A PICTURE

Though distinct both from the Chinese and the Japanese, the Koreans have many physical characteristics in common with both races—dark, straight hair, oblique eyes, and a bronze tinge to the complexion.

A WAYSIDE TEMPLE ON THE ROAD TO NONSATONG

Buddhism held sway in Korea from the tenth to the fourteenth centuries, but has been discredited in the kingdom for more than three hundred years, and the priests are an ignorant, immoral, and despised cast. While Confucianism is the official cult, ancestor worship is universal. Belief in malignant demons is so widespread that much of the substance of the average Korean is dissipated in the propitiation of evil spirits.

A SUPPLIANT AT THE "TEMPLE OF GOOD FORTUNE"

For five days and nights he slept on the wet ground, praying at this shrine for relief from rheumatic pains.

AN ACROPOLIS CROWNED BY THE SENTINEL CITY OF HEIZANCHIN

The flat-topped hill rises abruptly out of the level Yalu River valley and forms a natural fortress. For hundreds of years this city played a major rôle in the history of the country and was the scene of many fierce conflicts between Koreans and Chinamen (see page 48).

NATIVES AT A FUNERAL: WHITE IS THE EMBLEM OF MOURNING IN KOREA

The mourning period is three years, and upon the death of a royal person all the people must put on white. These facts are said to account for the adoption of white cloth for ordinary wear. Thus the Koreans are ever prepared for the inevitable end of man, whether in their own family or in the royal household.

XUM

were massed with lilies of the valley, which perfumed the air for yards about.

Two weeks after leaving Potaidon we reached the city of Heizanchin. A high, flat-topped hill rises abruptly out of the level river valley and forms a natural fortress, on the summit of which is the ancient town. For hundreds of years this sentinel city of Korea took an important part in the history of the country and was the scene of many fierce struggles between the Koreans and the Chinese, their neighbors across the river.

But its work has long been done; the grim old watch-towers have decayed and the crumbling walls are almost obscured by a luxuriant growth of vines and ivy. Nothing remains of the city iself except the picturesque gateway and an old shrine, standing on the very verge of the hill overlooking the valley below, where the Japanese have built a new and uninteresting town on the banks of the Yalu (see page 47).

The influence which a great river exerts, almost to its very source, on the country through which it passes was brought forcefully to my attention in Korea. As soon as we neared the Yalu we began to see evidences of lumbering and of the civilization which a great commercial enterprise invariably brings with it, one of the first indications being a party of Koreans carrying ordinary black umbrellas. These people had seen either very few white men or none at all, but were using many foreign articles brought by the Japanese.

YALU BOATS OPERATED BY MAN POWER

Lumber rafts were continually passing Heizanchin on their way down the river; but there were too many rapids in the vicinity to make the journey a safe one for our baggage, and so we continued across country about 50 miles, to the village of Shinkarbarchin. A log raft was secured there, and with our baggage piled aboard we floated some 375 miles, to the mouth of the river on the west coast.

The scenery on the upper Yalu is beautiful, but rather monotonous. Hills and mountains rise abruptly from the river on either side, leaving in many places hardly room enough for a footpath along the water's edge. At times the hills slope away far enough to give a few hundred yards of ground for cultivation, and there Korean and Chinese huts have found a resting place.

The river for the first 100 miles is exceedingly rapid, and a boat can float down it as much as 50 or 60 miles in a day. As it widens the force of its current decreases, the hills become lower, and villages appear at intervals. One of the most picturesque sights was the Chinese junks, loaded with salt or corn, which were being towed up the river by the natives.

The journey is a tedious one, for the boats must be hauled the entire distance against the strong current by man-power, receiving but little assistance from their huge brown sails (see page 36). It takes seven or eight weeks for the journey from the west coast up the river, and even by making the best possible time a junk cannot do more than one round trip and half of another before the winter ice stops navigation. The Yalu is called by the Koreans the "*Am-nok*" (green duck), from the color of the water in the early spring.

At Antung, at the mouth of the Yalu, our expedition took the train to Seoul, where the collections were packed for shipment to New York.

INDEX FOR JANUARY–JUNE, 1919, VOLUME READY

Index for Volume XXXV—January–June, 1919—will be mailed to members upon request

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THE GOLDEN EAGLE: KING OF BIRDS

"He clasps the crag with hookèd hands;
Close to the sun in lonely lands,
Ring'd with the azure world, he stands."

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CASPIAN TERNS

One of the most graceful of birds, the flight of the tern is unusual. It has been described as "unlike that of any other bird, whether of sea or land; buoyant and slightly wavering, it reminds one a little of the high, apparently uncertain flight of a large-winged butterfly; and it is in perfect harmony with the idea of a being whose life is spent amid wind and mist and fluctuating wave."

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BARN OWLS: THE POLICEMEN OF THE FARM

A family of barn owls on the place constitutes a valuable asset, for these birds are the most effective natural check on rats, mice and other destructive rodents. Due to their extremely rapid digestion they are always hungry and a half grown owlet will eat more than its own weight in a single night. An old owl will catch more mice than a dozen cats.

XUM

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THE PELICAN: A SUPER-FISHERMAN

Although heavy and clumsy in shape, the pelican is as expert as the kingfisher at diving. It drops like a plummet into a school of small fish and rises to the surface, pouch filled with fish and water. As it stretches its neck and draws its bill straight up, the water runs out and the fish are left,—then a backward flip of its head and the whole catch is swallowed at one gulp.

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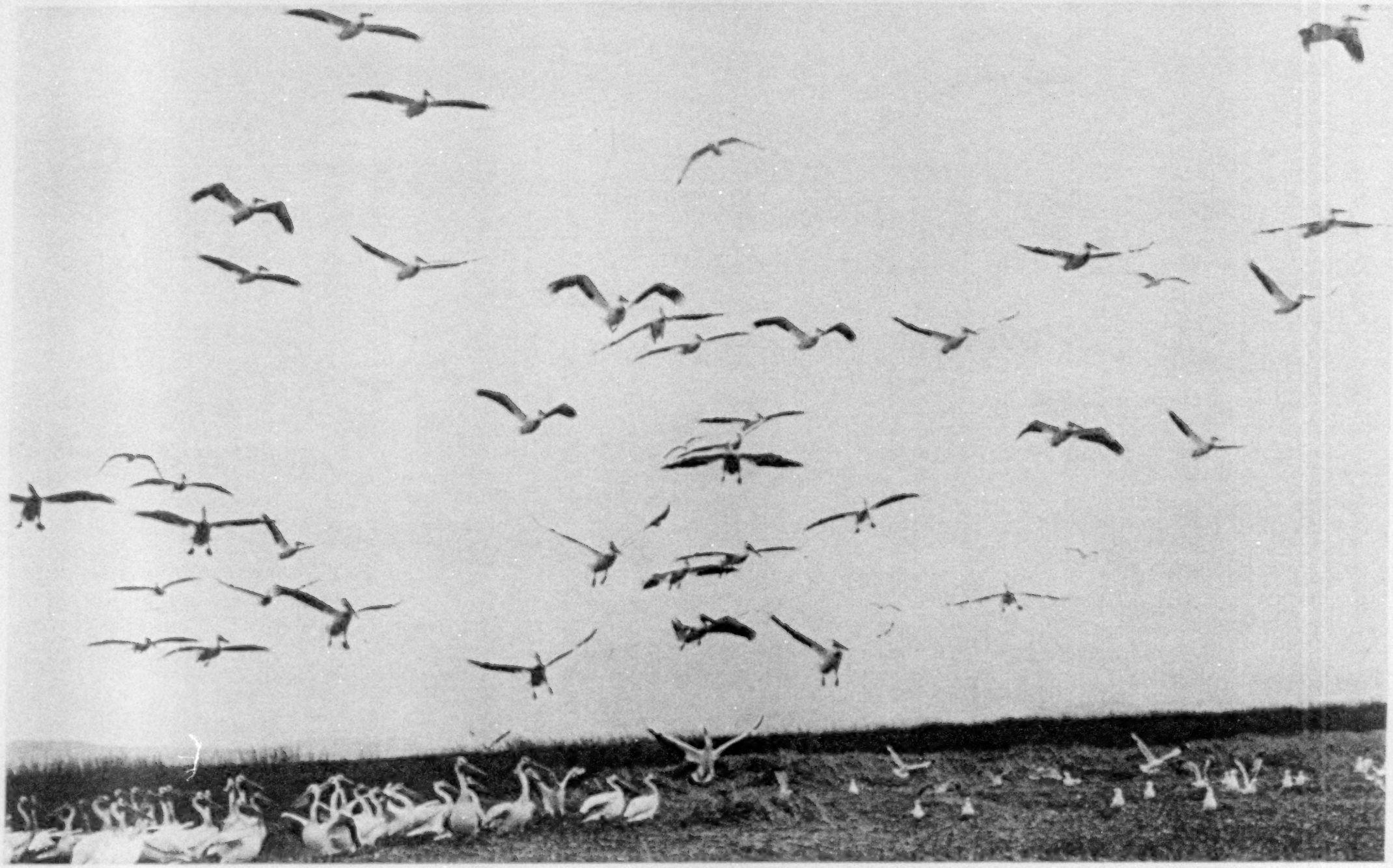
THE GREAT BLUE HERON

Although this bird nests high up in trees, it is much more at home on the ground, for it has been given equipment to facilitate its food-gathering activities rather than to put it at ease in the tree tops. Its "battleship gray" color reduces visibility; the long legs permit wading in streams; the dagger-like bill is an efficient weapon; the eyes, set slightly toward the bottom of the head, enable it to look down with comfort; and the long neck furnishes the means by which a fish, frog or tadpole swimming past a foot beneath the surface may be stabbed with accuracy and ease.



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A PELICAN COLONY

With bills sometimes eighteen inches long and a great sack below which is used like a scoop net, bodies five feet or more from tip to tip, a ten-feet spread of wings and legs disproportionately short, the pelican is a distinctive bird. After a fishing expedition the old bird returns to the nest, opens her bill and allows the clamoring young to help themselves from the plentiful food supply in the hanging pouch.

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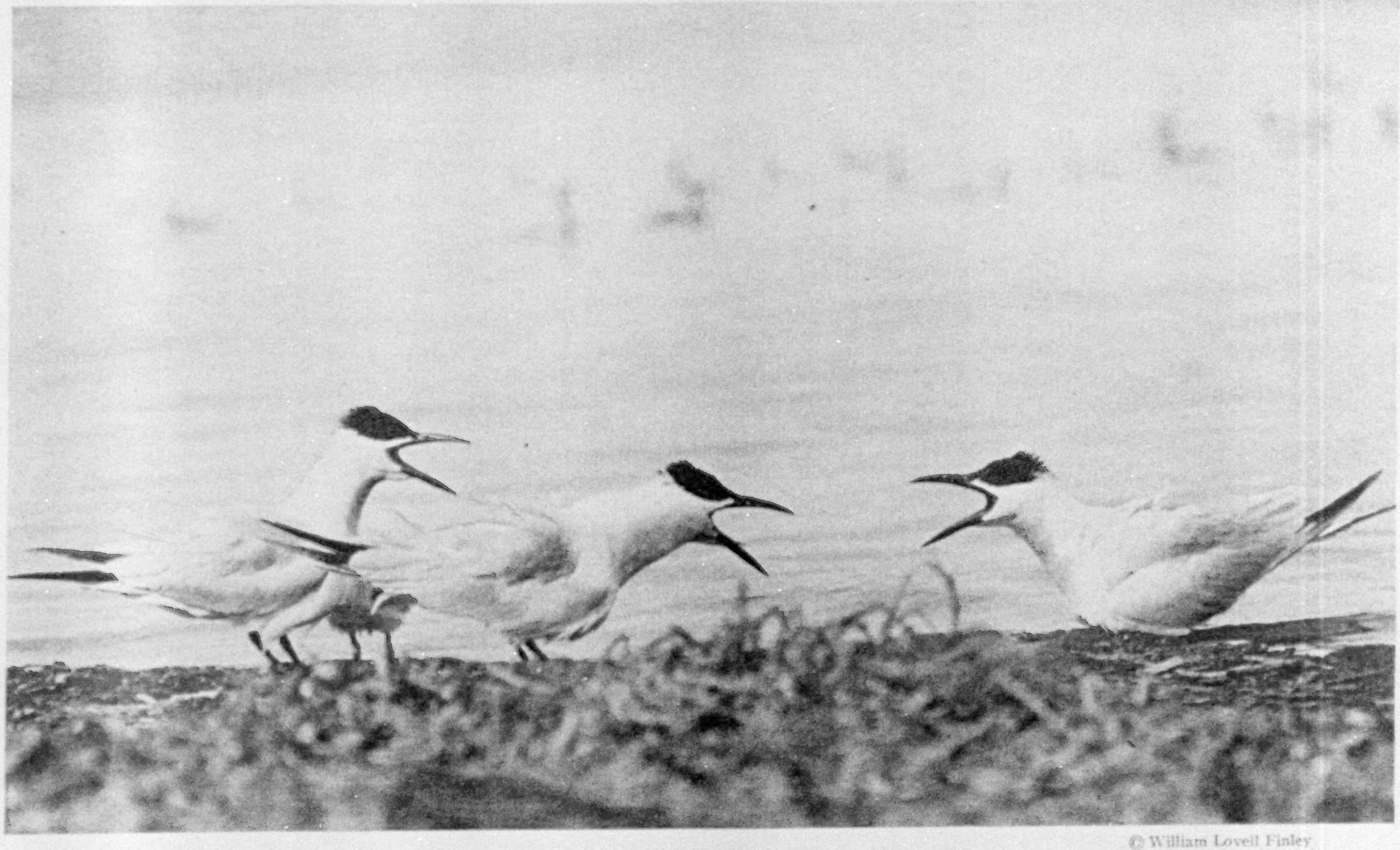

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A FAMILY ROW: CASPIAN TERNS

Myriads of the various varieties of these beautiful birds have been ruthlessly slaughtered in the past, but laws now protect them quite generally. They frequent low sandy shores, live together in colonies near the water and build their nests by scraping out a slight hollow in the sand, where they lay from two to four eggs. Their raucous voices in chorus produce a deafening din and one can almost hear the "creakee-creakee" issuing from the widely opened bills of the argumentative trio pictured above.

© William Lovell Finley

BON VOYAGE

Ships at sea are rarely without an escort of gulls, which follow day after day on long ocean voyages, subsisting upon the scraps thrown out from the galley. These birds are masters of the air and perform seemingly impossible feats. By a perfect adjustment of the body they poise on outstretched wings apparently motionless or make headway in the teeth of a gale without a single visible effort.

A HUNTER OF PLANTS

By David Fairchild

Agricultural Explorer, in Charge Office of Foreign Seed and Plant Introduction, U. S. Department of Agriculture

Among explorers no individual receives less recognition for signal service to civilization than the hunter of plants. His name is not written upon new-found lands nor upon hitherto uncharted seas. But through his vision, his daring, and his fortitude he enriches the waste places of his home land and helps to feed thousands of today and millions of the future. The plant-hunter is an unsung Columbus of horticulture.

IT IS one thing to go hunting for wild animals and quite another to go hunting for plants. In the one case there is the excitement of the personal danger and the immediate result of the game, followed by the memories that crowd in as one sits before the open fire and talks of the days that are past.

In the other, the excitement of personal danger exists to a lesser extent, there is no game to be immediately eaten, but with each passing year there is the increasing interest which comes from the growth and spread of the plants one has found and imported; the orchards or avenues or fields of grain or the beautification of thousands of city dooryards.

Frank N. Meyer was a plant-hunter for the United States Department of Agriculture. He hunted plants in China and Siberia and Turkestan and in the Caucasus, and he was drowned on the second of June last, in the muddy waters of the Yangtze River, after nine of the most picturesque years that any one could imagine, spent in the dense forests of northern Korea, in Chinese temples perched on distant sacred mountains, and in wanderings through the orchards, gardens, and cultivated fields of that vast Oriental country.

A LIFE OF ADVENTURE AND SERVICE

What a life! To wander with a definite, soul-absorbing object, on foot, from village to village, inquiring his way and learning as he went of some new plant variety which, because of its perfume, the deliciousness of its fruit, the color of its flowers, the shade it cast, its alkali resistance, or its hardiness in bleak northern regions, might be worthy of sending to this country for our farmers, horticulturists, or lovers of dooryard plants to grow.

As Meyer stood before one of these new plants to which chance and his flair for new things had led his footsteps, he tried to picture in his imagination the region in the United States where it would grow; to wonder in what particular it might prove better than that which Americans were then cultivating, and what use they would make of it after it developed to full size and produced its fruit or flowers. It was his business to look ahead and predict the future of his discoveries. His was different work from that of the botanical explorer who collects for a museum, who is only looking for species that are new and have never before been collected and placed in the great herbaria of dried specimens.

While Meyer did indeed find a new species of hickory,—new to science—had a new lilac named after him, and added thousands of specimens to the herbaria of the country, his work was primarily the getting of living material of cultivated useful plants or their relatives.

He sent in hundreds of shipments of living cuttings and thousands of sacks filled with seeds of the useful plants of the countries through which he traveled, with the result that there are now growing in America fields and orchards and avenues and hedges of Meyer's plants which, could he only have lived, would

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PLANT-COLLECTING CARAVAN EN ROUTE FOR THE WU TAI SHAN: CHINA

Unlike the gold-diggers' caravans, the mules are not loaded with picks and shovels and panning outfits. They are carrying bales of the moss in which florists pack plants, sacks in which seeds are shipped, and driers in which botanists press leaves and flowers. It was with this kind of an equipment that Frank Meyer traveled many thousands of miles in the out-of-the-way parts of Asia, looking for the relatives of our cultivated plants and others which could be grown somewhere in America and give pleasure and prosperity to millions.

have gladdened his heart and made him realize in a tangible way what a great pioneer work he was doing.

AN ENRICHER OF THE GARDENS OF THE WORLD

To Meyer, plants appealed just as to some people dogs or horses do, and this intense interest made him pack his collections with infinite patience, wrapping them in moss and Chinese oiled paper and burlap with his own hands before sending them by mail from some point in the interior of China to Washington.

Meyer was a Hollander by birth and spent his childhood among the gardens of Amsterdam, rising through his own talents to be the assistant of Hugo de Vries. His passion for travel took him on foot across the Alps and into Italy to see the orange groves and vineyards of the Mediterranean, and later led him to explore America and northern Mexico on foot. This restlessness, combined with his love for plants, drew him to my attention at a time when we were searching for some one who could travel over the roadless regions of China.

Meyer's work has always seemed to have a peculiar fascination for magazine and newspaper writers, and numerous are the picturesque accounts of his "experiences." Somehow, when I stand in an orchard and reach up into one of the trees and pick from its gray branches some of the large seedless persimmons which are the result of his work, I feel that he has left something more tangible, more inspiring, as a result of his travels, than is represented by the stories of midnight attempts on his life by ruffians in Harbin or threatened shootings by Chinese soldiers in the Kansu Province, exciting as those experiences were.

MEYER'S FELLOW-INMATES OF AN INN IN CHINESE TURKESTAN

"This is the house where we stopped for the night. The three Kirghiz women were much interested in the photographic apparatus and wanted their pictures taken. A Dsun Gan, the host, did not know exactly what to think of such an instrument. We were twelve people in this house, representing six different nationalities."—From one of Meyer's letters.

In addition to the actual introduction of seeds and plants, Meyer has rendered great service to our horticulture by showing us what the Chinese have done to improve their native fruits. They have developed their native persimmon from wild, inedible forms to varieties four inches in diameter and delicious as fruits can be; their native hawthorns they have made as large as small crab-apples, with an excellent flavor and texture all their own, suiting them peculiarly for preserving, and out of the native jujube, or Ts'ao, they have evolved scores of varieties, some of which are as large as apricots and with a flavor which puts them when candied into the class with the Persian date (see pages 68, 69, 72, and 74).

HE DISCOVERED METHODS AS WELL AS PLANTS

Our horticulturists can be proud of what they have done for many plants, but they have not yet begun to improve the native papaw, which is the largest wild fruit growing within the confines of the United States; nor have they selected our own large-fruited hawthorns, of which we have many more varieties than the Chinese.

While Meyer's travels were not in the main in what a geographer would call unmapped regions; while he made no geographic discoveries, his observations on the plants which the people use and their manner of using them constitute a real contribution to our knowledge of the foreign countries through which he traveled.

His first expedition in the years 1905-8 was into North China, Manchuria, and northern Korea; his second, in 1909-11, through the Caucasus, Russian Turkestan, Chinese Turkestan, and Siberia; his third, in 1912-15, through northwestern China into the Kansu Province to the borders of Tibet, and his last expedition in search of plants began in 1916, when he

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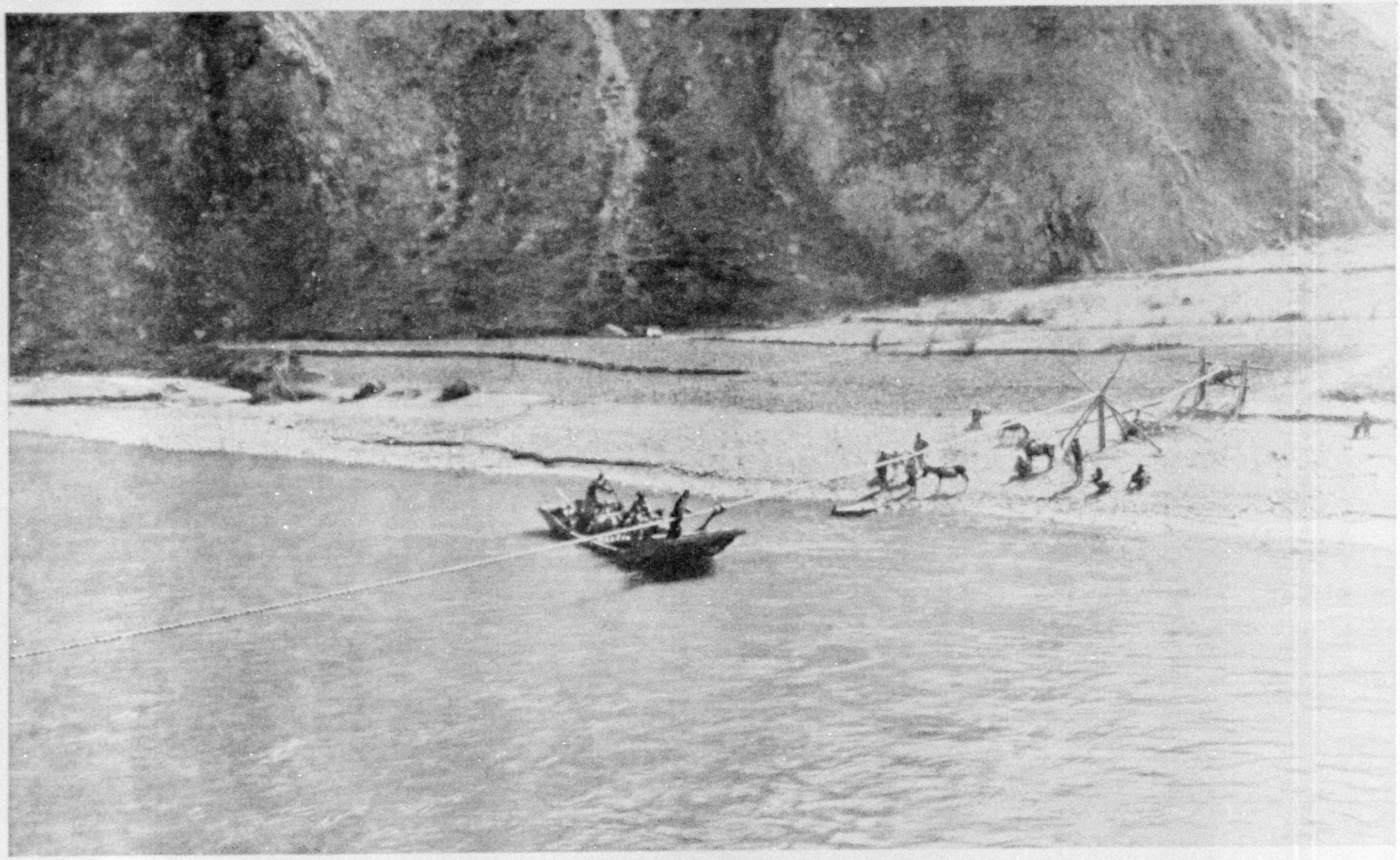

A BAMBOO CABLE FERRY FROM TIBET TO CHINA

One of the multitudinous uses of the bamboo in China is for the manufacture of cables with which the boats on the Yangtze are hauled over the great rapids. The photograph shows a ferry on the Siku River, which separates the western province of Kansu, China, from Tibet. Meyer scaled the overhanging rocks on the China side to obtain this illustration of one of the uses of the bamboo.

AN OLD PLANTATION OF THE EDIBLE BAMBOO

Thousands of hillsides in China are covered with bamboo groves. Through their thin green leaves the sunlight falls with a greenish tint. Their plume-like stems rise 50 feet into the air and for 30 feet are without a branch—just jointed, brilliant green tubes, the most fascinating things in the world to put one's hand on. For decades these groves furnish to their owners an abundance of young shoots in the early spring—shoots which are as good to eat as asparagus—and poles so light and from which so many things can be easily and quickly made that they belong in a class by themselves. This bamboo can be grown from the Carolinas to Texas, and there is no reason to doubt that our grandchildren will wander, as do the Chinese children, through beautiful groves of this wonderful plant.

went in quest of the wild pear forests in the region of Jehol, north of Peking, and the region around Ichang. He was caught at Ichang by the revolution and for many months was unable to escape. The confinement and uncertainty with regard to the great war and an attack of illness had by this time combined to bring on a recurrence of a former attack of what amounted to nervous prostration, and before he could reach the encouraging companionship of people of his own class he was drowned in the waters of the Yangtze River near the town of Wu Hu, thirty miles north of Nanking.

HIS LETTERS PICTURE STRANGE CIVILIZATIONS

Meyer's letters are the letters of a real traveler. When written from cold, dirty inns, they reflected his surroundings of discomfort; from the sublime mountain tops or mountain passes of the Caucasus, they were filled with his quaint philosophy of existence. From Buddhist temples in the Kansu Province of China, on the borders of Tibet, they gave pictures of that strange civilization forty centuries old.

LEFT ALONE IN TURKESTAN

Writing from Samarkand, Turkestan, he said:

"Alone in Samarkand! My assistant yesterday got tidings from home that his presence was urgently needed, as the man in charge of his farm was severely injured by a horse, and he left me. The interpreter had left the day before, as his eyesight and general health had become rather poor these last days on account of the great heat, and so it has come to pass that I am left alone in this far-away land, with only a mere smat-

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VEGETABLE GARDENS ALONG THE IRTISH: SIBERIA

Imagine the agricultural explorer walking through these gardens in southwestern Siberia, examining each variety of plant, in the hope that among them somewhere he might find a new kind or a new strain of vegetable which would prove better in some particular than those which we already have growing in America.

tering of Russian and no knowledge at all of the Sart language, which is much spoken here. I'll get out of it, however.

"On Saturday, June 11, we wanted to leave early, but I got a message from the police to appear before them. Something new, I thought. Well, we went and the whole thing was nothing but a curiosity to see me.

"The captain, or whatever his rank was, asked my interpreter whether I really was a botanist, whether I only had interest in plants, and more of such suspicious questions. He then told me that permission had come from St. Petersburg allowing me to photograph trees and plants only, and that for every locality I wanted to visit I had to get a special permit, either written or verbal, depending upon the importance of the place. But under no consideration would I be granted permission to go to the Afghanistan frontier, as foreigners were not allowed!

"We left the same day for Merv, where we arrived after midnight. The next day was exceedingly hot and the light so intense as to make one almost dizzy. We took out the collected herbarium material, which wasn't all dry yet, and gave it an airing—much trouble herbarium material causes on a journey!

"In Merv there is a pretty park, where tall specimens of poplars occur. I also saw there, for the first time in my life, fine, large specimens of Karakash elms. Very striking trees they are, with their umbrella-like shape and a dense mass of rather small foliage. These trees will be highly appreciated by our settlers in the desert regions.

"On Monday, June 13, there was a great market held in Merv. Turkomans, Afghanistanese, Kirghizes, and many other wild-looking inhabitants of these regions here mingled one with another. I bought some barley, millet, and wheat, but found little new.

THE CAMEL'S THORN OF THE DESERT

"The desert around Merv is quite interesting. The camel's thorn covers tens of thousands of acres of land. It was

THE INSPIRING MOUNTAIN SCENERY OF SHAN HAI KWAN, CHINA

Among the enviable things about the explorer's life are the scenes which his eyes are permitted to rest upon. A wonderful forest once covered the slopes of China's mountains, now denuded as the result of the lack of a forest policy.

in full bloom and its small pinkish-purple flowers, produced by the million, gave color to the landscape, just like the heath in northwestern Europe.

"This camel's thorn is a very useful plant here. First, it is a great feed for the camels, which are said to love this plant better than any other wild herb. Second, it is mown, dried, and used as a fuel. Nearly all of the bricks in the oases are baked through the heat of this plant. Third, it is a great sand-binder, growing even in pure, sterile sand, and being leguminous it prepares the soil by enriching it for better vegetation."

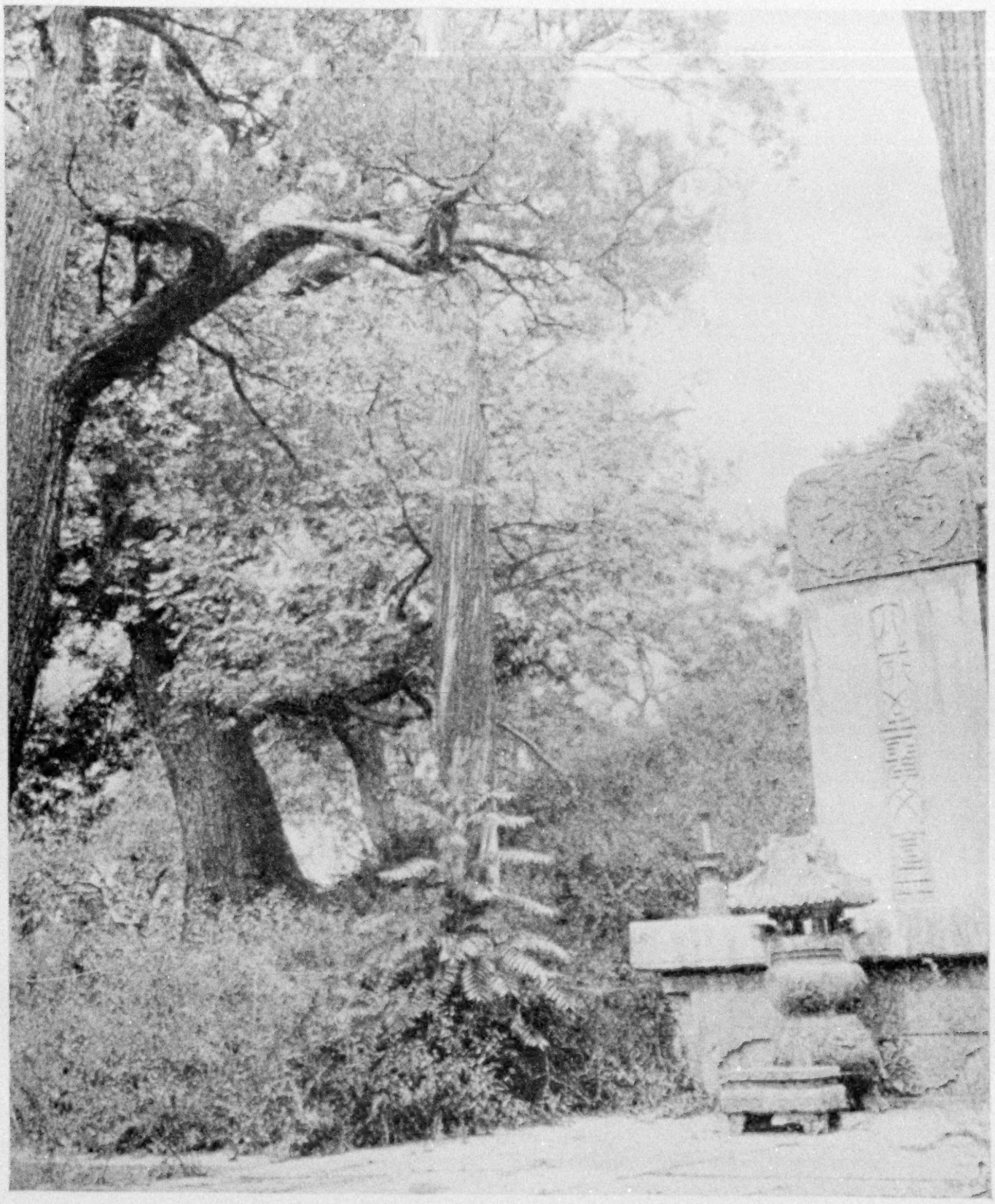
THE TRIALS OF THE TRAVELER

Writing from Chugutchak, Mongolia, the explorer says:

"Of the fourteen nights we spent *en route* I was under cover only four of them, and out of the other ten, one night we were disturbed by a wolf, two nights by rain, four nights by robbers prowling about, and the remaining three we made the most of.

"But on the whole it was not a bad journey, so far as personal comforts were concerned, for the sheep and goats had just lambed, and wherever we struck a Kalmuck or a Kirghiz settlement we were able to obtain a goodly quantity of either sour or sweet milk. The spring had really started and the cold at night was not very great. A few times our milk and tea froze overnight, but we are so hardened that we didn't suffer from the cold.

"We had serious trouble with the guides. I hadn't been able to obtain a man for the whole journey in Kuldja; so we took one from one village to another. The first four days it wasn't so bad, but on the fifth day, having entered a robber district, our Kirghiz guide deserted us and, worse than that, took with him the general letter of introduction with which he was supplied by the Chinese prefect



THE SEPULCHER OF CONFUCIUS

"The sepulcher of Con-fu-tse is surrounded by old trees," wrote Meyer of this sacred spot. "The large black trunk to the left belongs to an old male specimen of *Pistachia chinensis* which is several centuries old. The stems in front are *Juniperus chinensis*. This whole group exhales a spirit of the gray, hoary past, from which influence one cannot escape."

of Kuldja. There we were, without anybody knowing the roads and in a district considered dangerous.

"We marched according to a map I have and with the aid of a compass, and we finally reached a Kalmuck village, where I was received with great honors. The native chief had a special tent erected for me, killed a sheep, and was very friendly; and that was in the dreaded

Bogh-dolah, where the Kirghiz guides had told us that men are sometimes butchered like sheep for sacrifice. It seems those things did occur some twenty-five or thirty years ago, but now I hardly think anything like that would happen. In the days when Dr. Regel was botanizing here, strange things were reported; even the Chinese practiced human sacrifices in times of epidemics and famines."

A ROW OF POPLARS IN CHILI PROVINCE, CHINA

The trees, planted along the edge of a field bordering a stream and trimmed up high so as to make poles, had a peculiar appeal for Meyer. They may have reminded him of some scene in Holland or of some Dutch painting.

FINDING THE FAMOUS PEKING PEAR

Here is a letter postmarked Peking:

"On December 29 we started from Peking, *en route* to the Western Mountains. On the way I secured some pictures of white-barked pine trees and some cuttings and seeds of a large Lycium. That night we slept in a temple in the mountains where it was pretty cold, as there was no fire in these airy rooms.

"The next morning a fine snow fell, but about one o'clock it cleared up and we got bright, cold weather. I utilized that time to get a lot of scions of the male and female pistache trees and had several men and boys at work to try to get a quantity of good pistache seeds, for most trees bore simply empty capsules.

"I paid many 20-cent pieces and got but few seeds. These are very hard to get, for they are small and have about the same color as the ground from which they have to be picked. Notwithstanding my offer of a Mexican dollar for a small linen bag full, the natives were not willing to do the job.

"The pistache is a fine shade tree, especially the male form, and for the mild-wintered regions of the United States it will be a nice acquisition.

"In a temple yard that same day I collected a quantity of scions of the Chinese horse-chestnut, which will probably be a good shade tree for the United States.

POTS OF SOY SAUCE IN THE MAKING, COVERED WITH BAMBOO HOODS

The manufacture and consumption of this salty sauce in China and in Japan is comparable to the making and consumption of butter in Occidental countries. It is as universal in the Chinese dietary as butter in ours. The photograph shows a courtyard filled with jars in which a mixture of soy-beans, wheat, and salt is fermenting, and this mixture is protected from the sun and rain by cleverly woven hoods of split bamboo stems. Mr. Meyer made a careful study of this great soy-bean sauce industry and introduced a large number of varieties of the bean.

"The last day of the year found us on the road in search of the famous Peking pear, for which I have been looking ever since I came to China and for which fruit I made quite a few trips in vain.

"I didn't strike it until New Year's Day, but then my joy was great to start the year in such a nice way. I procured a whole lot of scions from this pear and from other varieties, and I would strongly recommend the Department to distribute every scion or bud not needed, and to give them to practical, successful growers only; for these pears will probably give us an entirely new strain of this fruit.

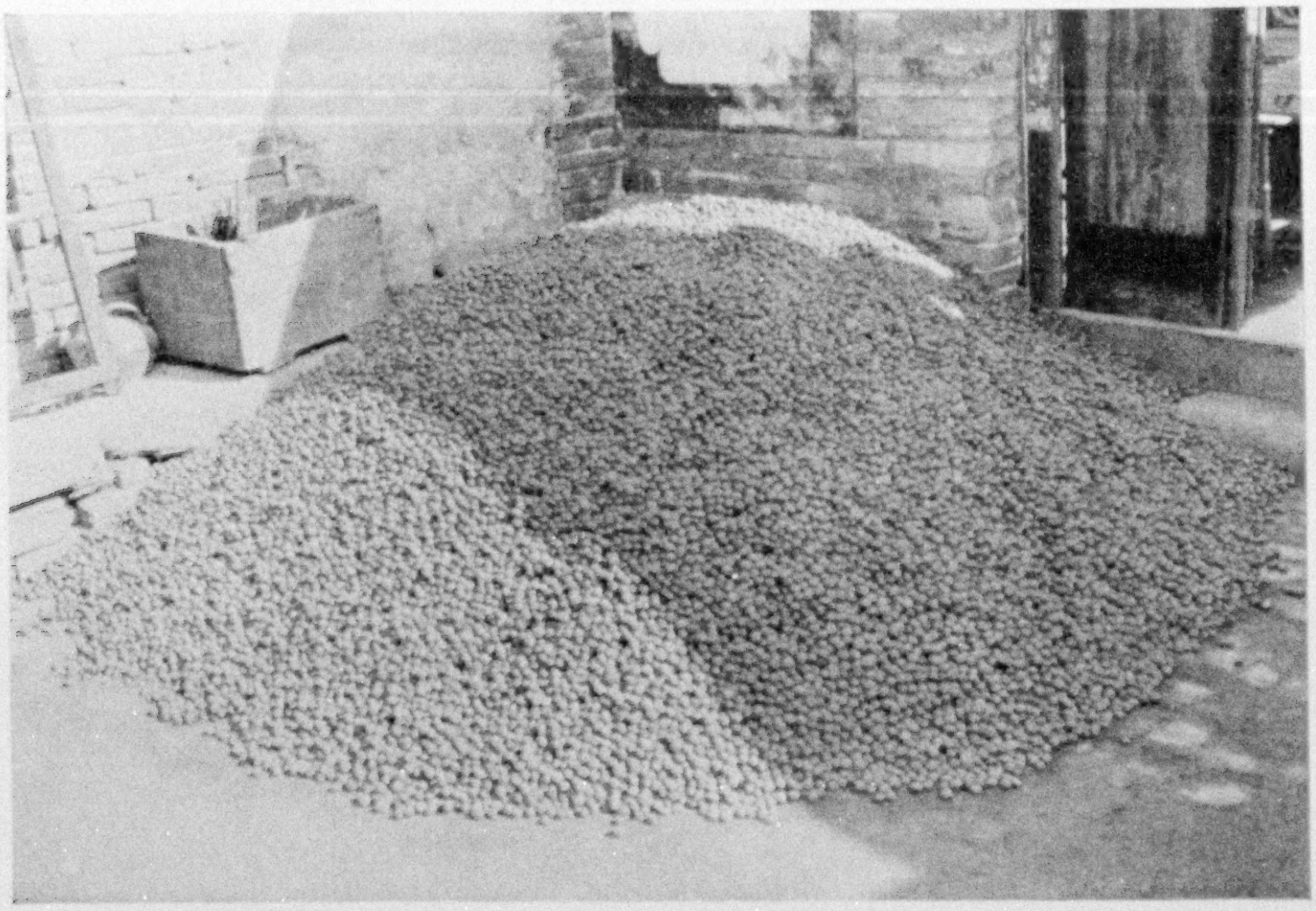
A HAZARDOUS MOUNTAIN JOURNEY

"The soil is rather sandy where these pears grow, and a short distance from the orchards it seems to be entirely sand. To prevent this sand from being blown away, the Chinese have planted long rows of small poplars. I send some cuttings of them; they may be of use in the United States for the same purpose.

"On January 2 we proceeded on donkey back to the mountains near Fang-shan. We had to proceed dismounted most of the time on account of the passes between the rocks, which were very steep.

"I had heard there were some nice specimens on an old imperial tomb in these mountains, but to my great disgust I found that the trees in question had all been cut down some years previously. Yet the trip wasn't in vain, for I found in these mountains the genuine wild peaches and apricots growing between the rocks. It seems that there are several varieties of these peaches. I send you herewith cuttings of three kinds, but doubtless there are more.

"Besides outdoor plants, the natives have hothouses constructed of sorghum



PEACH PITS FROM THE WILD PEACH OF CHINA

The wild peach of China is a species different from our cultivated peach. It grows on dry lands and lives where there is too much alkali in the soil for our fruit. The fifteen hundred pounds of pits shown in the photograph were imported into America, and there are now orchards on alkali soil in California, the underground parts of which are Chinese roots produced by these seeds.

stems heavily plastered with mud and with vertical paper windows on the south side only. They are heated by flues, and to keep the air moist large open vessels filled with water are placed at short distances from one another.

"In the forcing houses, also, large open vessels are kept filled with liquid night-soil, so as to promote a healthy growth. That the atmosphere in these places is far from being pleasantly odorous, one may imagine. To my amazement I saw forced cucumber plants with nice cucumbers hanging on them. If a young cucumber shows a tendency toward being crooked, the Chinese simply hang a piece of stone, tied to a string, on it and force it in that way to be straight. If we could only do this thing to crooked people, too!

CUCUMBERS AT 50 CENTS EACH IN CHINA

"I asked the price of these cucumbers and was told 50 cents apiece (Mexican). So this proves that Chinamen can afford to pay much for these luxuries. They do not grow their cucumbers in benches like we do, but have a few plants in a pot, first in a little soil, and when the plants get older more earth is added.

"They also had fine Pæonias, which were forced into bloom in the ground above the flues, and when in bloom they were planted in pots. They sell for 50 cents per bloom. They certainly looked fine.

"A totally novel industry was the forcing of onion sprouts. There was one house just chuck-full of these. The temperature inside was about 90° F., and I ate my lunch there and was treated to onion sprouts, tea, and forced young leaves of the 'tree of heaven.'

"Eight coolies, half naked, were working among the plants and a furnace was burning. The scent of the onions and the odors from vessels with certain liquids referred to, together with the heat, the novel food, and the change of tem-

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A CLUSTER OF CHINESE HAW FRUITS

Every American boy who has lived where hawthorns grow knows that the fruits in this photograph are nearly, if not twice, as large as most of the American haws. They have the flavor of the wild haw, but are not so mealy in texture, and one becomes very fond of them as a fruit to eat from the tree, just as one does the crab-apple. Nobody in this country or in Europe has set out an orchard of haws. In China, on the other hand, the haw is a cultivated fruit; it is grown just as our apples are grown, on grafted trees. It is of a beautiful red and orange color, has a flavor characteristic of the haws, and when dipped in melted sugar or when made into jelly it is delicious.

perature while going from one house to another—it was about 20° outside—combined to produce an effect upon my constitution which made me feel far from well for a couple of days.

"While in search of more seedless persimmon orchards, we happened to strike a bleak region, and having eaten very little at breakfast, I got hungry at eleven o'clock. The first village we struck couldn't accommodate us, but the villagers said, 'One mile from here is a nice place to get food and tea.'

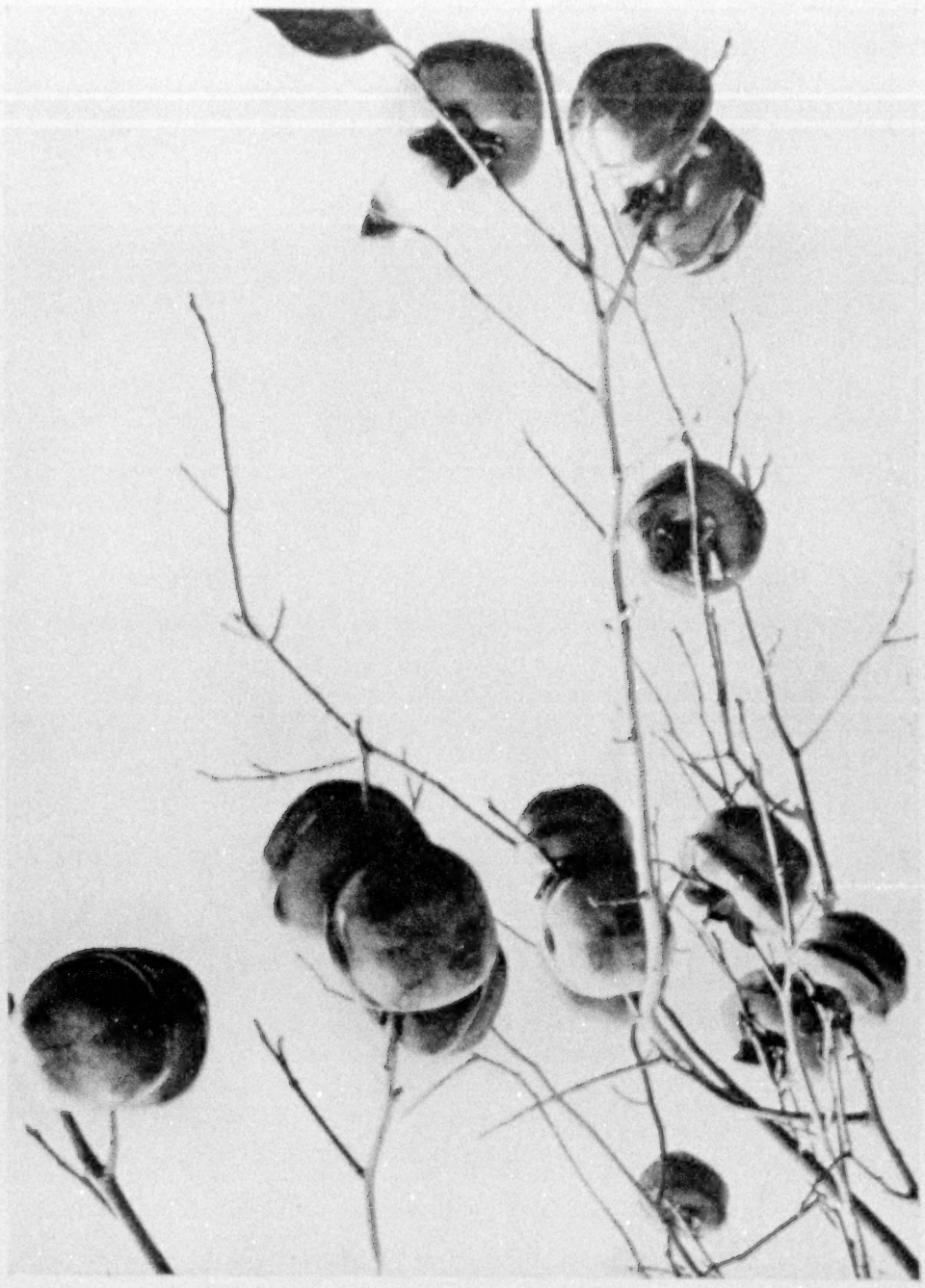
"We proceeded only to find out it was an absolute falsehood. These natives in turn said, 'About one and a half miles farther on you will find an inn.' And again when reaching that spot there was nothing to be found. The natives kept that game up until at last, at three o'clock in the afternoon, I came to a place where I could stretch out my cold, weary limbs on a brick bedstead with at least a nice fire underneath.

"I closed my doors rather hard, for I was disgusted and angry at this lying; but after having had a pretty substantial meal, I began to feel better and to think that the natives probably had deceived us to prevent our becoming discouraged at the thought of the long journey which was before us."

From Kang-ko, Korea, he sent this picture of customs and costumes:

"This Korean country is totally different from any other in the world. The people, for instance, are all dressed in white—some clean, most of them not, but still all are in white. In their houses the whole floor is heated, in most of them the year round. The entrances to the rooms are like windows, so small that one virtually has to crawl in.

"The food is totally different, too. Rice is the national food, and mostly it is a poor quality of red grain, boiled with some beans. Cucumbers are the most favored vegetable, and at one meal one gets them prepared in three or four ways—cucumber soup, salted cucumber, fresh sliced cucumber, and cucumber water. From a baby who is hardly able to walk, up to the old gray-haired men, everybody eats cucumbers, and preferably unpeeled.



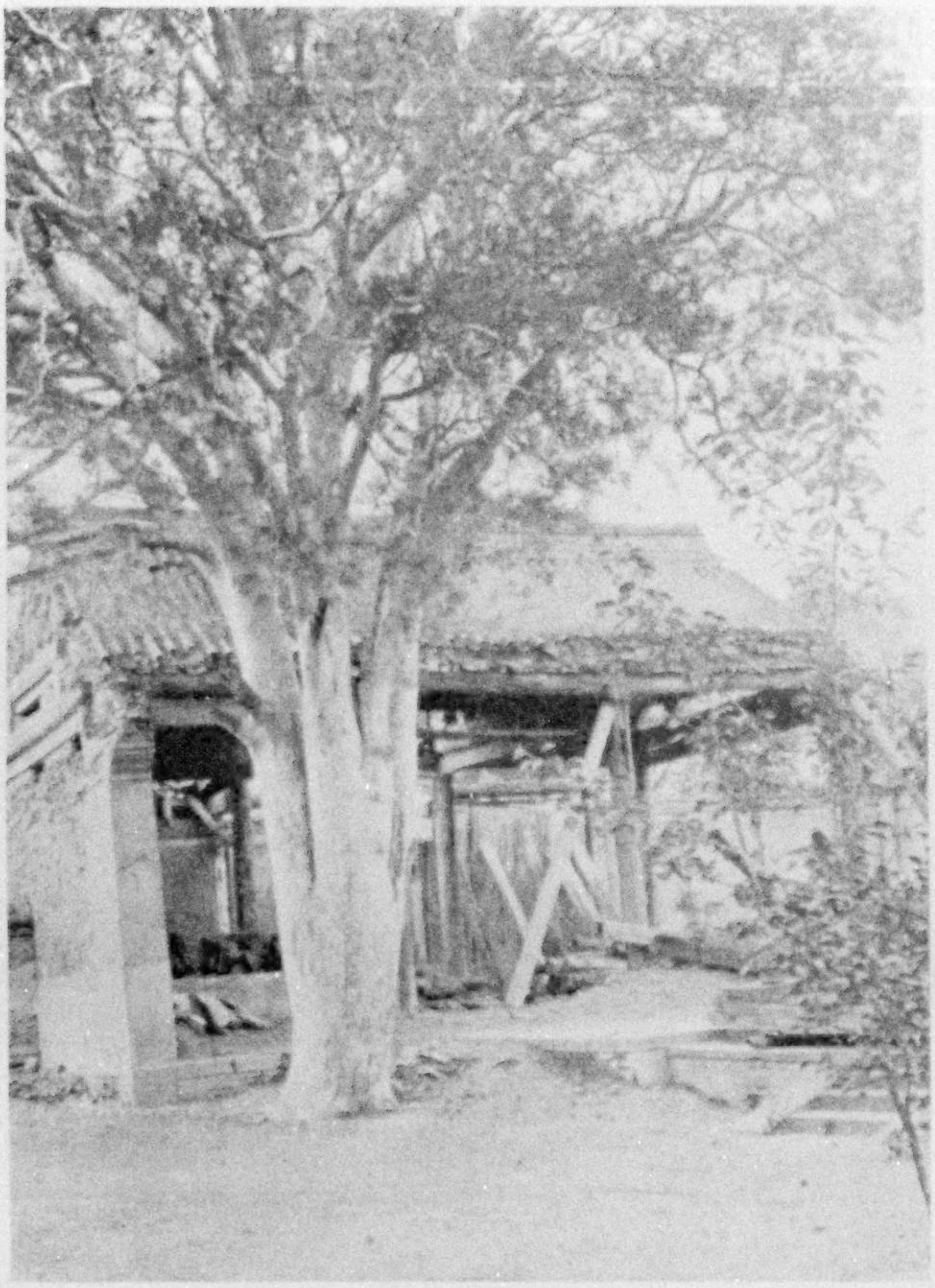
THE TAMOPAN PERSIMMON AS IT FRUITS IN CALIFORNIA

This Oriental persimmon which Frank Meyer introduced into America is worthy of the widest consumption. The fruits in the photograph, which were raised in California at the government plant-introduction garden, are three and and a half inches across and are seedless. They are of a deep orange color, with a characteristic deep groove around them, and when properly ripened they are delicious.

"Tea is unknown here; so the national drink is water. But now we come to a most interesting fact—they consume all their food and drinks out of *brass* bowls and cups; and there seems to be very little digestive trouble. How these people have come to learn the fact that copper is a good preventive for alimentary complaints would be worth finding out.

"Koreans all dress in clothes made of hemp fiber, and the material is hand-woven. Even their sandals are made out of the same fabric. The hemp is cut young, just before it comes to bloom, and the stems are placed in a closed clay oven and heated for some days. Then the bark comes off easily and with a little washing the fiber is ready to be dried and used.

"The main crops here in the north are sorghum in some varieties, small millets, wet rice, different varieties of soy-beans, maize, and buckwheat. The vegetables are cucumbers, pumpkins, chili peppers, onions, and a poor, weedy cabbage. Gar-



A WHITE-BARKED PINE TREE THREE CENTURIES OLD, NEAR PEKING, CHINA

Pinus bungeana, the white-barked pine of central China, as Meyer remarks, is "rather insignificant looking when less than a century old, but trees of 200 or 300 years of age are beautiful and serene enough to worship." Minister Rockhill expressed himself to Meyer several years before his death as wishing that he might rest under a white-barked pine. Thousands of these have been grown and sent out to parks, cemeteries, and private places throughout America. The contrast between the brilliant white bark and the dark-green foliage makes it a most striking landscape tree (see page 76).

den beans are also grown, mostly for the dry beans, though.

"Fruits are absolutely unknown. Here and there one sees a wild pear or a wild plum, but the natives do not cultivate any.

TOBACCO THE FAVORED PLANT OF KOREA

"A plant of great importance with the Koreans is the tobacco. They give it the best place in their fields, as the whole race is addicted to excessive use of the leaf. Some very large-leaved varieties are grown in this country, some of which I have never seen elsewhere. I haven't been able yet to obtain seeds of it, for these people live by the day. They don't have any seeds for a bad year or so—oh, no; let the day of tomorrow take care of itself! In agricultural seeds, too, they sow everything at once, and if some is left, mix it up with other seeds and eat it. The new crops are not ripe yet, so there are no seed to be had."

THROUGH PRIMEVAL FORESTS IN KOREA

In going to Hoi-ryong, Korea, Meyer relates that for many days he traveled through primeval forests, camping at night in log cabins which had been erected for the accommodation of hunters.

"These forests are splendid," he writes. "They consist mostly of larches, then follow spruces, then pines and lindens, birches, poplars, and gigantic willows, found in patches or as solitary specimens. The willows attain the same enormous size as the conifers—from 100 to 150 feet tall. I measured larches that had a diameter of four feet, five feet above the ground, and by counting the annual rings of some of the felled giants, I found that most of the trees are between 120 and 180 years old.

"Tremendous forest fires rage at times, and so we traveled sometimes for days through burned areas. A pitiful sight it is, but in these areas one can see the sun and the sky — a thing which is well-nigh impossible in the unburned forest.

"To explore the primeval forest is simply impossible. There is generally only one trail through it, and as soon as one leaves it he is in the entanglement of vines, fallen and dead trees, undergrowth, peat-bogs, mud-holes, and heaven knows what else.

"Traffic is exceedingly light — some days we didn't see a single man or beast—and food is not to be found; neither is water, except at a few places.

"There is an awful gloom in these forests; birds are seldom seen or heard, and the quietude is almost oppressive. Even the drivers of the horses come under the spell of the solitude, and our caravan proceeded in silence, except for the noise of breaking branches of trees and the sound of the horses' hoofs touching rocks or tree stumps in the track. In some places a monarch of the forest had fallen across one's trail, and then we had to make wide detours to keep clear of it."

A PLANT HUNTER'S HAUL

How the packages of seeds and cuttings used to come in from Meyer. He packed them with great care, sewing each package in cloth, but the long distance and the rough handling generally tore the outer wrapping to pieces. This is part of a collection of rare specimens which Meyer made in Chinese Turkestan.

This is a letter from Tai an fu, Shantung, China:

"Yesterday I returned from a hurried trip to Feitcheng, bringing back with me eight grafted trees of the famous Fei peach.

"We had much trouble in getting these peaches, as the people demanded the most fabulous prices; for instance, $40 and $50 per tree. My interpreter, through some diplomatic dealings, got a plot containing eight trees for $40, but we had to leave Feitcheng hurriedly, because the relatives of the man who sold to him had not been consulted and they wanted to take the trees back or destroy them

THE FIRST AMERICAN ORCHARD OF CHINESE JUJUBES (SEE ALSO PAGE 74)

There is something fascinating about the beginning of any new thing, and there attaches to this first orchard of jujubes a peculiar interest, as jujubes will possibly equal in commercial importance the Persian dates, which they so much resemble in taste. The trees are young, but it is a characteristic of the Chinese jujube to bear very young. Two-year-old trees are often loaded with fruit. To the orchardists of our common fruits almost the world over comes the dread of frost at blossoming time, but the jujube orchardist's trees do not bloom until May, long after all danger from frost is past in the localities where they thrive. This orchard was planned as a surprise for Meyer, but he never saw it. The orchard is two years old and located on the Plant Introduction Garden, at Chico, California.

Two of the trees are safely on the road to America now, however, and the others go with me tomorrow.

BEDLAM IN A CHINESE INN

"I cannot make up my accounts here, for conditions in the inn are too fierce to allow one to confine one's thoughts to such work," wrote the explorer from Chieh Chou, southwest Kansu, China. "Imagine an overcrowded inn, with merchants and coolies shouting and having angry disputes; with partitions between the rooms so thin as to make them almost transparent, with people gambling with dice and cards all night long; others smoking opium: hawkers coming in, selling all possible sorts of things, from raw carrots to straw braid hats from Szechuan, and odors hanging about to make angels, even, procure handkerchiefs.

"Here you have a picture of 'the best inn in town.'"

OPPRESSED BY LONELINESS

Occasionally, during the last year of his travels, a note of loneliness was sounded in his letters:

"Of course, this exploration work, with its continuous absence from people who can inspire one, gets pretty badly on one's nerves. One must be some sort of a reservoir that carries along all sorts of stores. Soldiers in the field have more dangers to face, but they get at least companionship and often recreation supplied to them.

"For about one month now I haven't seen a white person.

"My new interpreter is of the sponge variety—that is, absorbing all and giving back little or nothing—and this work of mine is very hard for the Chinese to understand anyway. They seem to consider it a silly thing to spend so much money for a few seeds or plants."

"Here I am sitting in a small hole of a town, all surrounded by high mountains, on which a slight snowfall has been deposited during the past night," begins a letter written from a place designated as six days' march west of Ichang, Hupeh.

"The flanks of these mountains are brown with withered vegetation, but here and there a tallow tree stands out as a bit of flaming red and purple; some scrub of *Rhus cotinus* (the native smoke tree) is blazing carmine and a few bushes of *Rhus javanica* (another variety of sumac) are of an indescribably warm hue of orange-red. The Indian summer is speeding to its close and soon winter will set in. I am trying to round up several things which we would have collected long ago had those wild pears not kept me down at Kingmen.

THE YANG TAO—GOOSEBERRY, RHUBARB, PINEAPPLE, AND GUAVA IN ONE

"A few hours ago I delivered to the local post-office here a small wooden box, made to order, addressed to the American Consul General at Shanghai, marked D. A. 29 and containing twelve fruits of the wild Ichang lemon and some fruits of a smooth variety of a native fruit called the Yang tao. How these fruits will arrive after their long journey in winter time I have no idea. It is only an attempt, like so much in life is.

"I am highly pleased with the Yang tao, and the more I see of it the more thoroughly convinced I am that it is a *coming fruit* for the southern United States.

"The fruits keep well into winter, and they ship well, especially after having been subjected to a few frosts. They are of excellent flavor, being a combination of gooseberry, rhubarb, pineapple, and guava. They have the habit of setting one's teeth on edge, just like pineapples and blueberries, and they are laxative!

"But the vines are not hardy. Where one finds them growing well, one notices coir palms, loquats, privets, and bamboos around the farmsteads. Zero temperatures may hurt them badly, I am afraid.

"The plants also will have to be grown like muscadine grapes—that is, on high arbors—and they might have to be bruised to make them bear heavily. In the wild state, at least, I noticed that plants subjected to strong mountain winds, which twist them around at times, bore much more heavily than those growing well sheltered.

"I am sure that in the rolling sections of the Carolinas, Georgia, northern Florida, etc., where loquats survive for ten

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AN IMPORTANT MEYER DISCOVERY, THE CHINESE HICKORY TREE

Until Meyer discovered this Chinese hickory, near Chang Hua, in the province of Chekiang, no botanist dreamed that there was a hickory tree anywhere outside of the confines of the North American Continent.

A FRUITING BRANCH OF THE CHINESE JUJUBE

While the peach, the almond, and the apricot bloom in the early spring, the jujube waits until May, or even June, and thus escapes the spring frosts (see pages 59, 72, 75, and 76).

or more years, the Yang tao will do well, and of course in many parts of California it should thrive, too.

CUT OFF FROM COMMUNICATION WITH THE WORLD

"I wonder whether these parcels will ever reach you! I have not received mail now for a few months. Conditions here are as upset as ever; travel is nearly impossible, except by an occasional Japanese steamer. Food supplies are running low, fighting has occurred near and around the city almost hourly during these last weeks, and everybody feels depressed from this long-drawn state of suspense.

"The foreigners here have formed a defense committee, but, of course, a mere handful of white residents can do nothing against brigands in uniform, as nearly all of these Chinese soldiers are, and there are several thousands of the parasites around us. Last week I saw that some of these fellows took the hearts out of men whom they had shot, and mutilated the corpses in unspeakable ways. They are going to eat these hearts to get courage!

"Of late I have been assisting many of the foreign residents in changing their gardens and transplanting large and small trees. It took twenty-five coolies to remove one large tea olive—a thing never before attempted in Ichang. Should all of these various trees pull through, my work will be tied up with this city for a hundred years to come."

SOME OF MEYER'S GIFTS TO AMERICA

It would be inappropriate here to give a complete list of the hundreds of plant species and varieties which Meyer sent into this country. But when the roses bloom in New England, his *Rosa xanthina*, the hardiest of the yellow bush-roses, will be a mass of pale gold. When the ground thaws on the bleak plains of the Dakotas, thousands of his Chinese elms will put out their leaves and take their place in the wind-breaks of that treeless region. All the way up from Florida and Georgia and over the Canadian border this elm is now growing—a remarkably adaptable tree.

His ash from Kashgar will spread its branches over the alkali soils of Nevada. When cherries are ripe in California, his Tangsi cherry will be the earliest to ripen by a week or ten days.

The peach-growers of California are watching orchards now five years old, the trees of which all have for their root systems those of a wild Chinese peach which is resistant to drouth and alkali and which Meyer found was in common use as a stock by the Chinese.

As the autumn peaches ripen, the trees of the Fei peach will attract unusual attention, for it is the pound peach of the Shantung Province and bids fair to take a special place among the canning peaches of this country. It was so rare a variety, and living peach budwood is so hard to ship, that Meyer had to make two long special trips of several weeks on foot to get it.

In parks and cemeteries, wherever it will grow well, the globular-headed willow deserves to find a place, and the first specimens, now growing at Chico, California, and on the banks of Rock Creek Park, in Washington, D. C., are worthy of a special visit.

THE DELICIOUS JUJUBE

The curse of pear-growers is the fire blight, which often ruins the growth of years in a single season by killing the twigs and branches and even the trunk of the tree. Just how far the hardy Ussurian pear, sent to us by Meyer, will prove to be immune to this disease we do not yet know; but Professor Reimer, of Oregon, who is an authority on the subject, declares it is the most resistant of all the species of the pear genus.

Until Meyer brought back the grafted varieties of the Chinese jujube and we planted an orchard of them in California, the name itself recalled only the jujube paste of our fathers' time, which was used for coughs and colds. It bore no relation to the fruits, as large as good-sized plums, which, when processed, are as delicious as Persian Gulf dates (p. 74).

When the boys and girls go chestnutting and see with growing concern that their favorite chestnut trees are dying and realize that unless we do something theirs may be the last generation to have the pleasure of gathering these most interesting of all nuts, it may be a comfort

THE EXPLORER MEYER WITH A BRANCH OF JUJUBE IN HIS HAND

In 1906, when Meyer first saw orchards of this new fruit in China, he wondered if the trees would grow in America. He lived to learn that the trees not only would flourish, but would bear abundantly in this country, and he was gathering bud wood of all the horticultural varieties which he could find (see pages 72 and 74).

to them to know about the little Chinese chestnut trees which Meyer has introduced and which are very resistant to the chestnut-bark disease. While this Chinese chestnut will not take the place of the American chestnut as a timber tree, we may expect from it an abundance of good, sweet chestnuts.

MEYER'S SPINACH SUBSTITUTE

In our hot summers, spinach, that most popular of vegetables, does not grow, but Mr. J. B. Norton, through careful selection, has produced a strain, which he calls "Manchuria," from seed which Meyer gathered in Manchuria.

Guarding, as it were, the tomb of the great Confucius, stands a century-old tree of the Chinese pistache. In summer it casts a dense shade, and in autumn its scarlet foliage makes the landscape brilliant, like the oaks in the Berkshires. There is now an avenue of these superb trees forming the entrance to our Chico Plant Introduction Garden, and it has already begun to furnish ample seed supplies to plant the country (see page 64).

The white-barked pine, one of the most striking landscape trees of China, its brilliant white trunk contrasting with its dark-green needles, we have scattered by the hundreds through the drier regions of this country from large quantities of seed which Meyer secured. One of them is growing over the grave of the most enthusiastic plant lover of all of our diplomats, the late W. W. Rockhill, U. S. Minister to China (see page 70).

Imagine the old age which such a hunter as Meyer might have had when in place of fading memories of forest encounters he could put his hands upon the trunks of great trees grown from tiny seeds which he had collected in his travels as a young man, or see with failing eyesight the masses of flowers pro-

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duced by shrubs and trees which he first saw on the mountain slopes of China!

To those who chase through life from one adventure to the next, heedless of whether they leave a trail or not, this may, perhaps, appeal but little; but to those who look ahead, imagining a better world here on this wonderful planet, the idea of having so definite and tangible a share in its enrichment must be very satisfactory.

While without the hearty support of a force of men and women who have cared for his introductions, Meyer's work would have been impossible, it is fitting that his name should stand out prominently, for his was the pioneer's work and it depended peculiarly on his individual initiative.

Meyer's life activities have ceased, and the real causes of his death will always be a mystery. He came to this country a Hollander, a gardener by profession; he became an American citizen and he has given to this land of his adoption a host of lasting benefits.

THE LAND OF LAMBSKINS

An Expedition to Bokhara, Russian Central Asia, to Study the Karakul Sheep Industry

By Robert K. Nabours

Of the Kansas State Agricultural College

With Photographs by the Author

SINCE time immemorial man has made use of the skins, hair, wool, and fur of animals to protect himself from the elements and for purposes of adornment. However valuable and universally used are vegetable substitutes, the clothing products furnished by animals are now demanded in larger quantities than ever before; so much so that consumption has overtaken production, and the situation for the future is considered critical by competent observers.

Especially is this true with regard to the production of furs; it appears that the advancement of civilization increases the demand, while at the same time it decreases the number of wild animals which, since time out of mind, have furnished mankind with this indispensable commodity.

As wild fur-bearing animals have decreased in numbers and the scarcity and prices of furs consequently increased, many individuals have been led to undertake the rearing of fur-bearers in captivity, as, for example, the efforts to breed foxes in Canada and parts of the United States, and the wide-spread interest in skunk-raising. It is of significance that in one State alone the game warden, within a period of two years, issued more than fifty permits for breeding skunks in captivity.

KARAKUL SHEEP AS A SOLUTION OF THE WORLD'S FUR PROBLEM

Attention has been directed recently to the ancient industry of Karakul sheep-raising to aid in restoring the equilibrium between the increasing demand and decreasing supply of furs. The pelts of the young lambs of this breed of sheep, because of their special qualities of warmth and beauty, appeal to persons of both sexes, old and young, of all stations in life and of all nationalities. There is, perhaps, greater possibility of restoring to mankind a supply of furs from this source than from any other.

Recently, through the generous coöperation of Mr. L. M. Crawford, ranchman; Dr. H. J. Waters, then president, and President W. M. Jardine, then director of the Experiment Station of the Kansas State Agricultural College, the author traveled in Russia, Bokhara, and other parts of Turkestan largely for the purpose of studying Karakul and other sheep.

On my first expedition to the East to study the Karakul, my Bokhara interpreter, a man of education and influence

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FLOCK OF KARAKUL SHEEP GRAZING IN BOKHARA

The feeding of animals is a serious problem in a country where green fades from the landscape except in the brief spring that stands between piercing cold and cruel heat.

KARAKUL LAMB AND EWES: BOKHARA

The kindly shepherd vies with the soft-eyed ewe in caring for the wobbly-kneed youngster that is so soon to sacrifice his curly coat to some follower of fashion. Throughout the Near East there is a community of life and trust between the sheep and his shepherd which has been the theme of many a prose poem since the time when David, the shepherd boy, sang the song that has cheered the ages: "The Lord is my shepherd."

in affairs of trade, government, and religion, gave me cordial and enjoyable entertainment for two nights at his home in the oasis. During that time I did not secure a glimpse of any of his three wives or the older daughters among his seventeen living children. Our host informed us, however, that we were being duly scrutinized by his womenfolk, as well as by the neighbors, through "peep-holes."

The women remained, for the most part, in the kitchens preparing food and tea and sending them out to be served to us by the boys of the family.

In order to converse with the native it was necessary to address, first, an English-Russian-speaking interpreter, and he, in turn, passed the message on through an interpreter who spoke Russian and the native dialect. The part taken by the native in the conversation would then come to me reversely through the same interpreters.

My conversation with actual breeders of Karakuls was confined, for the most part, to the owner of a flock of 800 who resided at the juncture of the oasis and desert steppes of Bokhara, where are found the outlying irrigation ditches, which during ordinary years contain water for only short periods—a situation that had forced this ranchman to move in and out at intervals and to depend upon wells continually.

On arriving at the headquarters of the Karakul sheep-owner, our party was received with kindly consideration, though with much curiosity and even suspicion, by the proprietor and two of his sons. However, as we sat on the rugs in his quarters, in Oriental style, with shoes removed, and drank tea, cordiality soon developed, and one after another of the men and boy attachés of the establishment joined the circle.

At first the conversation, carried on with great difficulty through the two interpreters, consisted of questions about sheep-raising, the taking of pelts and marketing, with the cautious replies; but as time passed, the situation became more mutual, till eventually the tables turned and they were quizzing me concerning affairs in my country.

NEWLY BORN LAMB: STEPPES OF BOKHARA

The pursuit of beauty too often leads to cruelty, and some of the methods of securing unborn lambs are quite revolting. Demand for objects of beauty, wholesale destruction, popular indignation, conservation, and scientific development—these are the stages through which the gathering of furs, feathers, and flowers has progressed. Now the acquaintance of even the fearsome skunk is cultivated in order that beauty may be perpetuated.

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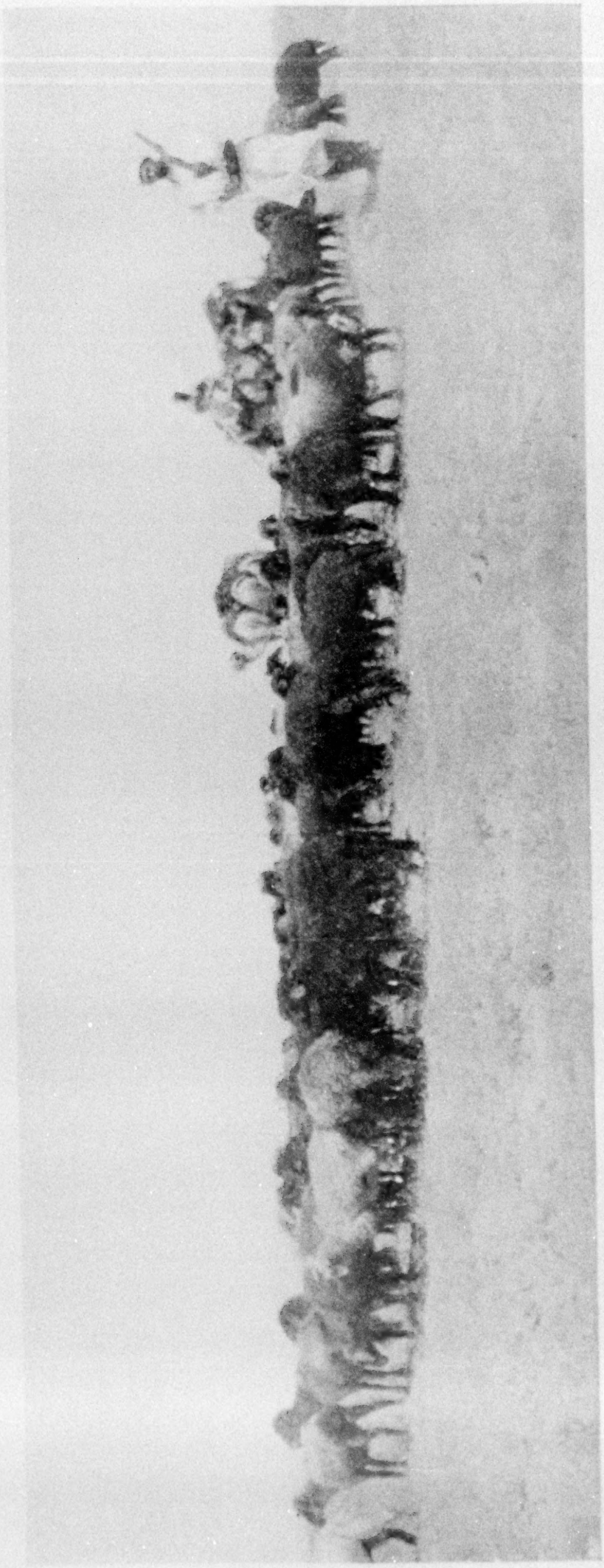

PART OF A FLOCK OF EIGHT HUNDRED KARAKULS: STEPPES OF BOKHARA

Although Turkestan is crossed by several large rivers that once formed a garden of loveliness, the steppes are now left to sheep and camels which can find life where other animals would die of hunger and thirst. Yet the most luscious of melons and the finest of lambskins come from the same town in Bokhara.

At noon we were served with a sumptuous feast of delicious, well-cooked Karakul-Kirghiz mutton, with the very palatable Tatar bread, and sheep milk for those who desired it, and always tea.

THE KARAKUL FLOCK AND ITS PANICKY SHEPHERDS

After the feast we went out on the steppes through a terrific sandstorm and fierce July heat, over shifting dunes, where vegetation was conspicuous largely by its absence.

Here we found a considerable flock of Karakuls in care of two shepherd boys so ignorant and so terrified by the presence of westerners that only extreme devotion to their sheep kept them from running away. In fact, when they first saw us approaching the flock was started off in such haste and driven so rapidly that the sheep and the boys were brought to a standstill only by great exertion on the part of some of the men, who, fortunately for the object of the excursion, were on horses instead of camels.

So panic-stricken were these boys, or young men, that it was some time before we could calm them and secure their cooperation in corralling, sorting, and

otherwise assisting in the study and photographing of the animals.

While the inspection was in progress a lamb was born, the hair being a splendid type of Persian lamb, with beautiful black luster and tight, even curl (see page 79).

As an illustration of the close personal attention the lambs receive till they are able to care for themselves, the ewe and one of the shepherds seemed to vie with each other in attending this helpless arrival. The flock drifted away and the lamb was unable to travel, so the ewe and shepherd remained, and finally the boy gathered it in his arms and came on up with the crowd.

These shepherds, although extremely ignorant, especially in any civilized sense, and living the lives of the sheep night and day for months at a time, are said to know the members of their flocks individually and the parentage of each sheep, even among large numbers.

INTERBREEDING OF KARAKUL AND KIRGHIZ SHEEP

Since numbers of the ewes of the fat-rump Kirghiz mutton sheep are yearly placed among the Karakul flocks for the purpose, as related by the owner, of keeping up the vigor, and since no written records are

A YOUNG KARAKUL RAM ON THE STEPPES OF BOKHARA

A KARAKUL RAM IN BOKHARA

Curiosity is a passion stronger than fear in many cases, and the timid Sarts and Bokharans who first fear the camera man soon bring their dearest possessions to him in order to have them photographed. The story current in many parts of the East that camera lenses are made from the eyes of murdered children may explain why many a fond mother protects her infant from the recording eye of the kodak fiend.

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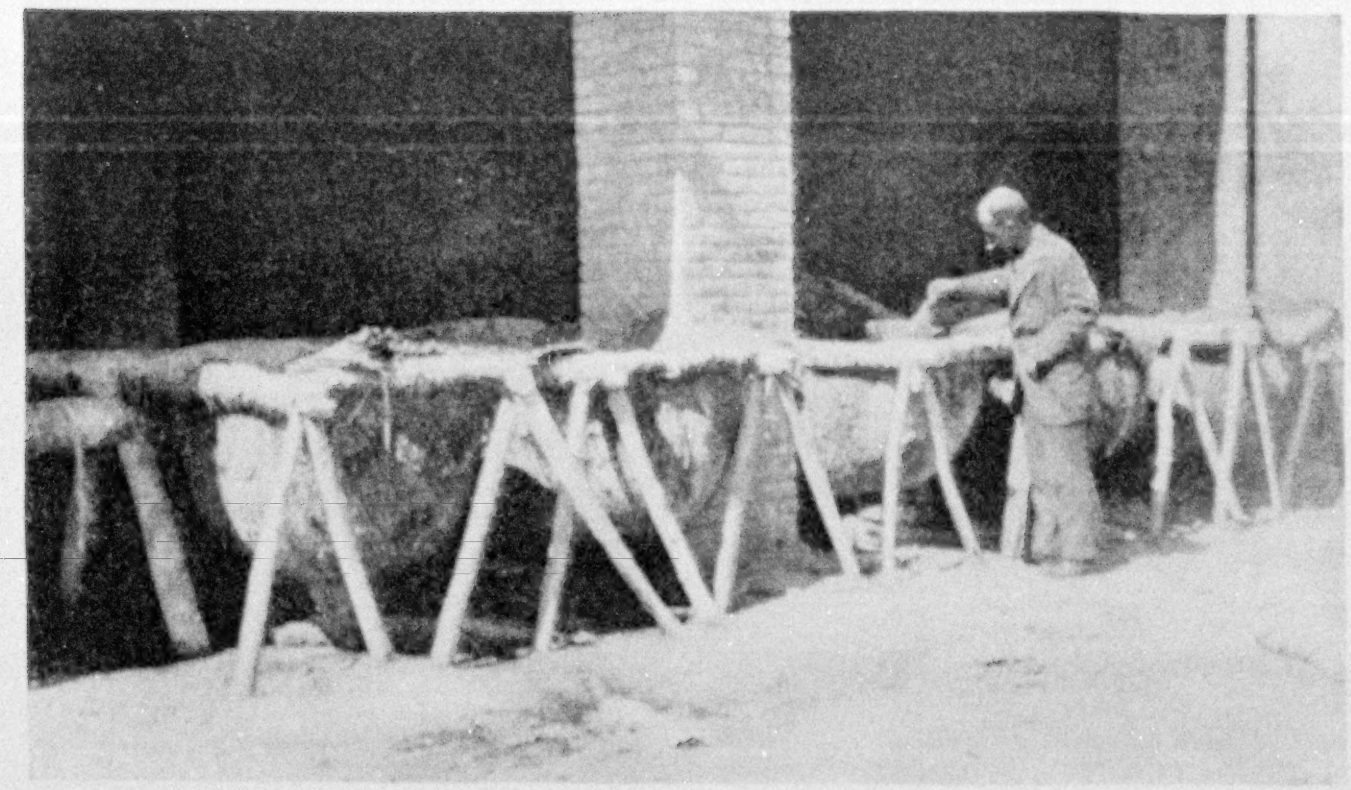
KIRGHIZ, OR FAT-RUMP, SHEEP OF CENTRAL ASIA (SEE PAGE 83)

In Syria, where the fat-tailed sheep are fed by hand, the fat of the tail forms the basis of some of the most delicious and indigestible pastries, and the tail develops until it touches the ground, and sometimes is so heavy that it must be supported by a trailer on wheels.

HOSPITALITY IN THE HOME OF A WEALTHY BOKHARAN

The host, on the right, owner of 800 Karakuls, spoke to the native dialect-Russian interpreter, holding the fan, who communicated with the author through the Russian-English interpreter, who is taking the photograph. Questions and responses went to the host through the same channel. Some one has spoken of talking through an interpreter as "compound fracture of speech, followed by mortification."



SKIN VATS FOR CURING KARAKUL SKINS: BOKHARA

Salt and barley meal are mixed with water to form the curing bath for the precious lambskins that will later form the fashionable fur collar. It takes two weeks to cure a skin before it can be rinsed and dried. Even after months of use, these sheepskin vats are still soft and pliable.

retained, the observations and memory of the shepherds must be depended upon for knowledge of the grade of any individual.

These Kirghiz sheep, fat rumped and tailless, and producing no fur, reach an extraordinary size, some of the largest weighing as much as 400 pounds. Their flesh is of excellent quality and remarkably free of the often objectionable "muttony taste" of western sheep. An edible fat is the principal component of the huge rump, which weighs many pounds and, when cooked, is used as a substitute for butter.

Although undoubtedly shepherd boys do have remarkable memories of a kind, which is probably the main stock of their intellectual equipment, and their knowledge of the parentage of any particular Karakul is to some extent employed in the selection of breeders, my host stated that the breeding males and, to a less extent, the ewes to be bred are selected almost exclusively on the appearance of their fur at birth. The retention of an individual in the flock, especially a male, depends upon the value of the pelts of his progeny.

There does not appear to be any well-defined Karakul breed with precise standards, as among English and American sheep. The full-grown animal varies greatly in size, from quite small to medium, with black face and legs. The fleece of the adult sheep is long and coarse, the outside usually gray, and those with the least underwool are preferred. As a rule, the Karakul is inferior in conformation to the well-known breeds of English and American sheep.

The male lambs, except those to be reserved as breeding rams, are killed at birth or soon after and the pelts taken. If the pelts are not secured when the lambs are very young, the hair loses its curl and luster. Most of the ewe lambs of all grades are reserved for breeding purposes.

Baby Karakul is obtained by the killing of old ewes just prior to the birth of what would probably be their last lambs, and especially if they are believed to carry twins.

Some of the methods of obtaining lambs just before birth are quite revolting, such as running the ewes, at the proper stage of pregnancy, up and down steep inclines or actually beating them, in order to cause abortion.

Karakul sheep are found almost exclusively in the emirate of Bokhara, Russian Central Asia (Turkestan).

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CARAVAN OF HIDES AND KARAKUL SKINS ARRIVING AT MARKET: BOKHARA

All camel trails in the Emirate of Bokhara, like the roads to Rome, lead to the market-place in Bokhara City, where furs are bartered for shoes, camel trappings for green tobacco, and rugs, whose beauty is destined to grace the home of wealth, for gaudy bead necklaces. The market-place at Bokhara is one of a vast chain of world stores where the native product is bartered for the exotic novelty—one link in the bond that is fast binding the peoples of the world through taste for a universal bill of fare.

HIDE AND KARAKUL SKIN BAZAAR

The same hot sun of the desert that acts as a mordant for the lovely dyes of the rug-weaver serves to perfect the pelts that are shipped from Bokhara to all parts of the world. From here the pelts were formerly shipped to the great fall fair at Nizhni Novgorod, on the upper Volga, but more and more the buyers are dealing with the producers in Turkestan itself. Priceless treasures piled in dusty squares and almost ignored by those who depend upon their sale for livelihood—that is one's fleeting impression of a Bokhara market.

WASHING KARAKUL SKINS: BOKHARA

Karakul lambskins are commonly seen in the United States and Western Europe in the form of overcoat collars, overcoats and wraps, and, more rarely, muffs, neck pieces, and caps. The skins are divided into several classes: Persian lamb, broadtail, Astrakhan, Shiraz, Bokharan, and Karakul lamb. The term Astrakhan is best known, and once included all sorts, from the flat, glossy broadtail, rippling beneath the hand like watered silk, to the heavy skins of cheaper grade whose curl is loose and coarse.

A WAREHOUSE OF KARAKUL SKINS: CITY OF BOKHARA

In Baku, in the spring of 1918, a good Karakul skin was worth two hundred rubles. The rich Tatars use this skin for their *papachs* and officers used the lighter grades for trimming their military overcoats, which were lined with sheepskin. In the Orient priceless treasures are obscured behind mud walls, and furs that are the envy of the followers of fashion are handled in the same impersonal way the bank cashier handles money.

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LINCOLN AND COTSWOLD EWES, WITH THEIR HALF-BLOOD KARAKUL LAMBS, ON A KANSAS RANCH: OWNED BY MR. L. M. CRAWFORD

Karakul rams have usually been mated to ewes of American breeds, since size and stamina are not common in thoroughbred stock. But quality rather than size is desired in the lambs, many of which are still-born. Glove linings and opera-coat trimmings are made from the smallest skins. Mongolian lambs are creamy white in color and the curl of the hair is loose and soft, quite different from the delicate, glossy black skins of the broadtail variety.

"Elsewhere the light descends from above; in Bokhara it radiates upward," tradition gives as among the last words of Mohammed as he was being translated to heaven. Between the ninth and fourteenth centuries Bokhara was the gathering place for the most studious men of Asia. It still has nearly a hundred colleges where students learn to read the Koran, and there are more than 300 mosques. It remains a center of Islamitic learning, though greatly diminished within recent years. The observer is impressed with the dignity, reserve, and conservatism of the men. The women when out of their abodes are invariably heavily veiled.

A more unfavorable situation for raising live stock can hardly be conceived than that encountered in this region. Grass, to any extent, is available only from the first of March, soon after the winter breaks, till the latter part of May.

A HAPPY, PRIMITIVE PEOPLE

On the journey from the city of Old Bokhara to the steppes to study the Karakul sheep, across the Zerafshan and its innumerable tributary irrigation ditches, one encounters a considerable population of apparently satisfied and happy people, engaged for the most part in intensive agriculture.

All work is carried on in the most primitive fashion and with hand-made instruments of the kinds dating back thousands of years. One sees during the day horse, camel, or man-motived wheels raising the irrigating water from one level to a higher, the cutting of alfalfa with hand scythes and transporting it on the backs of donkeys, the reaping of grains, also by hand, and threshing with flails or by the tramping of goats, camels, and donkeys, and winnowing in the manner of Biblical times.

Slow-moving, crude water-power mills on the main canals clean the rice and grind the grains. Occasional small flocks of sheep and goats, chaperoned always by some one, usually an old man or boy, even when there are only two or three, are seen grazing on the banks of ditches or vacant small fields.

For many years the Russian Government kept several of its best engineers engaged in devising means of extending the irrigated areas as far as the available water allows. At the outbreak of the war this work was making good progress and considerable areas were being added to cotton culture.

A beneficial influence was being exercised on the agriculture of Turkestan through the Department of Agriculture at Tashkent, an excellent general experiment station and the special dry-farming station, both located near Tashkent, and a Karakul sheep-breeding station, near Samarkand.

The semi-official Turkestan Agricultural Society was performing valuable services to the country in studying soils, climate, crops, introducing modern appliances, and improving the markets. I have never become acquainted with a more intelligently active body of men.

So far as could be observed, the administration of the country was highly beneficial. The Russian railways afforded transportation for exports and imports, and although the natives were badly cheated by the Western traders, many of whom were entirely without business ethics, their produce at least brought them something, and they were enabled to purchase many necessities—a situation undoubtedly greatly improved over the times prior to the Russian occupation.

Whatever may be said of the shortcomings of the former Russian Government (and most that I have read and heard about it does not coincide with my observations), it appeared that the natives were being aided in many ways and under very great difficulties, with the least possible disturbance of their religion and customs.

It must be remembered that, as in case of most of their own races with whom the Russian officials had to deal, these people are extremely ignorant and at the same time excessively conservative. It is not claimed that conditions were ideal, or ever promised to become so, but they were greatly improved and showed promise of still further betterment.

Fifty-four head of Karakul sheep, mostly rams, have been brought from Russia to America since 1909 by Mr. C. C. Young. These and their offspring

XUM

A KARAKUL LAMB NEWLY BORN IN KANSAS, SHOWING BEAUTIFUL GLOSSY CURL

have been distributed widely over the United States and Canada, and the rams have been largely mated to ewes of American breeds. Marshall estimated that in 1915 the flocks owned in Texas, Kansas, and New York numbered 1,000 head of grades having one-half or three-quarters Karakul blood and 60 head of the pure Karakuls.

Since then the numbers have certainly increased, and some very high-grade individuals have been produced. But it will be necessary to import a number of new animals in order to get the industry properly under way.

It is also desirable that some of the fat-rump, tailless Kirghiz sheep (see page 83) should be imported, since the successful production of Karakul skins in Bokhara is undoubtedly connected with, if not entirely dependent upon, the use of the large and vigorous Kirghiz ewes.

Dance any time — the Victrola is always ready!

Ready with lively one-steps and fox-trots and fascinating waltzes that make you forget every care and just want to dance on and on. Music that inspires you to dance your very best—the perfect playing of bands and orchestras renowned for their splendid dance music.

As enjoyable with a Victrola as though you actually hired the entire band or orchestra itself. Loud and clear enough for a whole roomful of dancers—and yet easily adaptable when only a few couples (or even one!) want a quiet little dance all their own.

Victors and Victrolas $12 to $950.

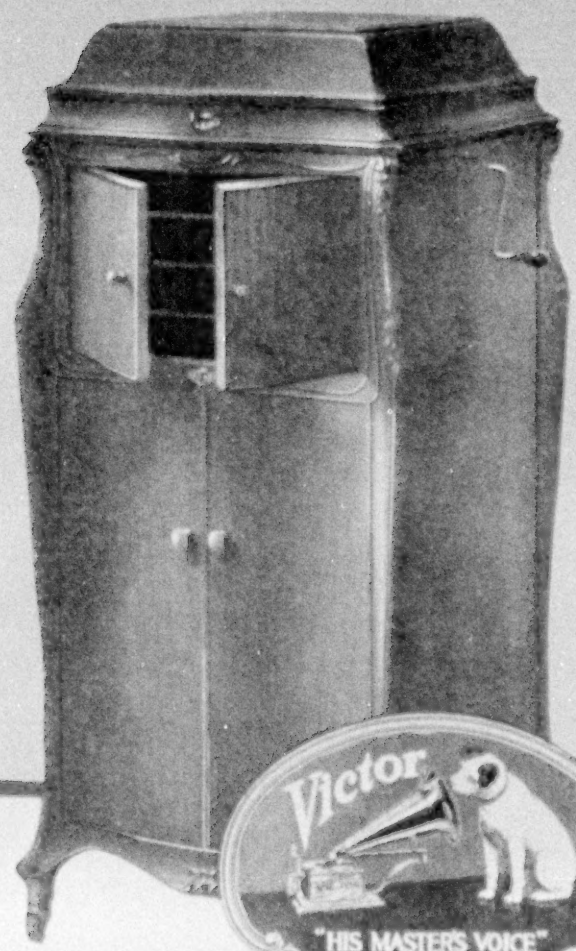
Any Victor dealer will gladly play the newest Victor Dance Records and demonstrate the Victrola.

Victor Talking Machine Co., Camden, N. J., U.S.A.

Important Notice. Victor Records and Victor Machines are scientifically coordinated and synchronized in the processes of manufacture, and their use, one with the other, is absolutely essential to a perfect reproduction.

New Victor Records demonstrated at all dealers on the 1st of each month

"Victrola" is the Registered Trademark of the Victor Talking Machine Company designating the products of this Company only.



Victrola XVII, $275
Victrola XVII, electric, $332.50
Mahogany or oak

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Send the Sampler

and win a smile!

$1.25 the pound at our agencies nearly everywhere —usually the leading druggist.

STEPHEN F. WHITMAN & SON., Inc., Philadelphia, U. S. A.

Makers of Whitman's Instantaneous Chocolate, Cocoa and Marshmallow Whip

Forward—together!

FROM your country's rich mines, from fertile soil, from uncut forest, American Industry seeks raw materials to fashion into the myriad needs of modern life.

But our industrial greatness is only partly due to bountiful nature. Unless men and management, with hands joined, are backed by invested capital, the wheels of industry will clog and halt.

American Industry will need added capital to produce the foods and manufactured goods which the world demands. This forward movement will mean a prospering nation of full-time workers—resulting in more profit for all.

The needed money to "carry on" will be raised by industrial bonds which will be offered to the public.

Such bonds are the safe means by which the American people, their principal carefully protected, share in the earnings of American Industry and, therefore, in American prosperity.

If chosen under sound advice, these bonds are dependable income-bearing "promises to pay." Their soundness is backed by the actual properties themselves.

A thorough, painstaking analysis of each issue precedes our offering of bonds to the men and women of the country. Our recommendations are at the free disposal of everyone who has learned the habit of saving money and now wishes to put that money to work.

THE NATIONAL CITY COMPANY
NATIONAL CITY BANK BUILDING
NEW YORK

You will find a National City Company Correspondent Office in 50 of the leading cities of the country.

In each of these offices you can purchase Government, Municipal, Railroad, Industrial, and Public Utility Bonds of the highest character.

Each of these offices is equipped to render unusual service to investors generally, and to bond buyers in particular.

The National City Company

National City Bank Building, New York

BONDS
SHORT TERM NOTES
ACCEPTANCES

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GRAFLEX

For that difficult picture—a Graflex

On the speedway, at the athletic field, in the midst of swiftly moving traffic—a Graflex will get the picture in a thousandth of a second.

On the dull cloudy days, when you can take only time exposures with other cameras, you can make a slow, hand-held snapshot with a Graflex.

In the shade of a tree, on the porch, even in a well lighted room in-doors, you can catch those fleeting pictures of the children at play—the unconscious, unposed pictures of happy childhood—with a Graflex.

The Graflex Focal Plane Shutter, the Graflex lenses, the Graflex mirror, that shows the picture right side up at the very instant of exposure—it is this combination that makes these "impossible" pictures, possible.

The Graflex uses Kodak film cartridges, glass plates or film packs, as you choose.

Catalogue free at your dealer's or by mail.

FOLMER & SCHWING DEPARTMENT

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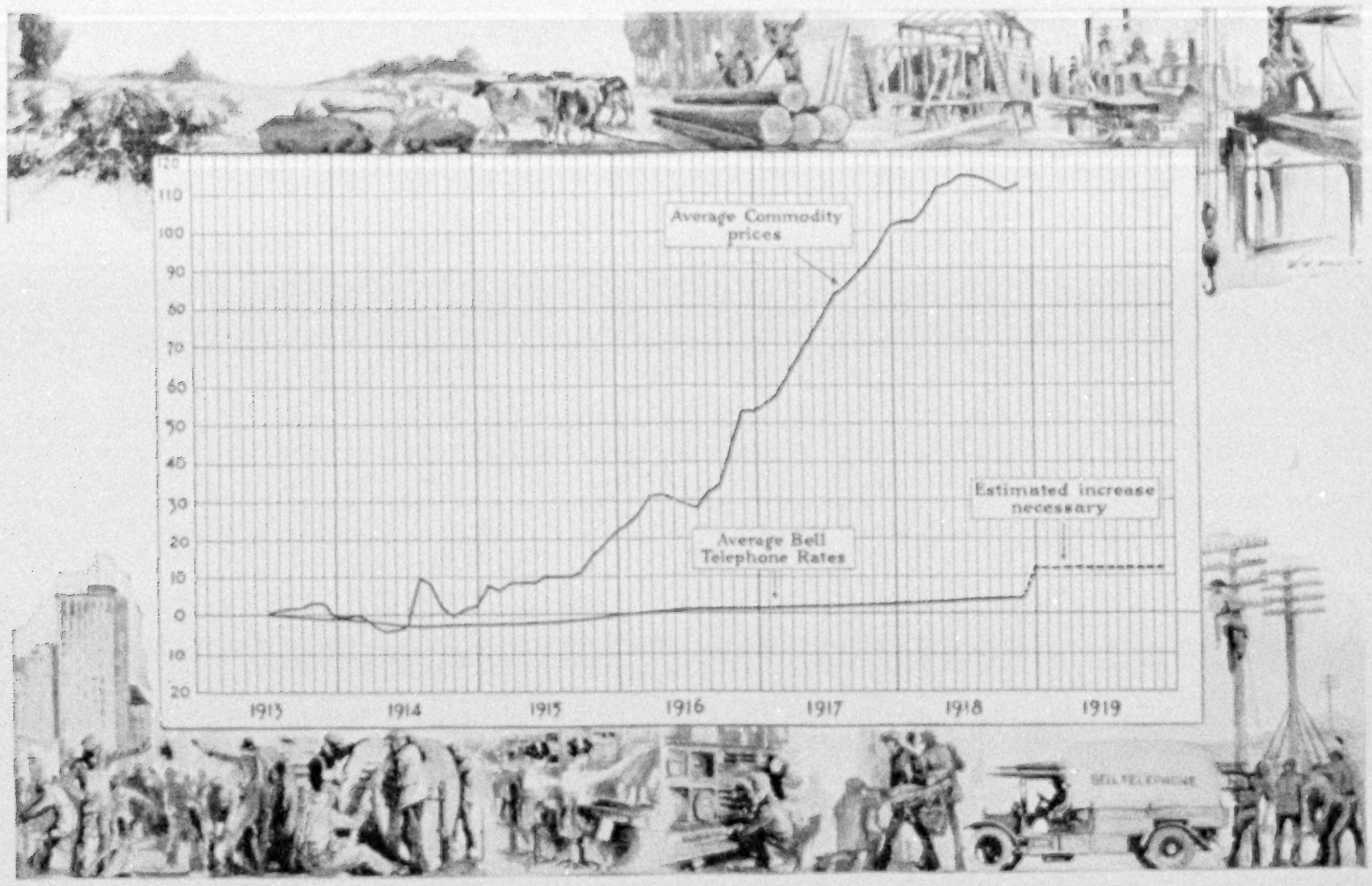


A Comparison of Costs

A graphic picture of the high cost of doing business is shown by the rise in a long list of commodity prices during the past five strenuous years.

By the exercise of unparalleled economies, telephone rates have been kept almost unchanged.

The fact is, the increase in the cost of commodities has resulted in what is equal to a decrease in telephone rates. In other words: The dollar which was spent for the telephone has bought more than twice as much as the dollar spent for the commodity.

The activities of reconstruction which are now upon the nation have put a great burden upon the telephone. This condition has made necessary an advance in telephone rates.

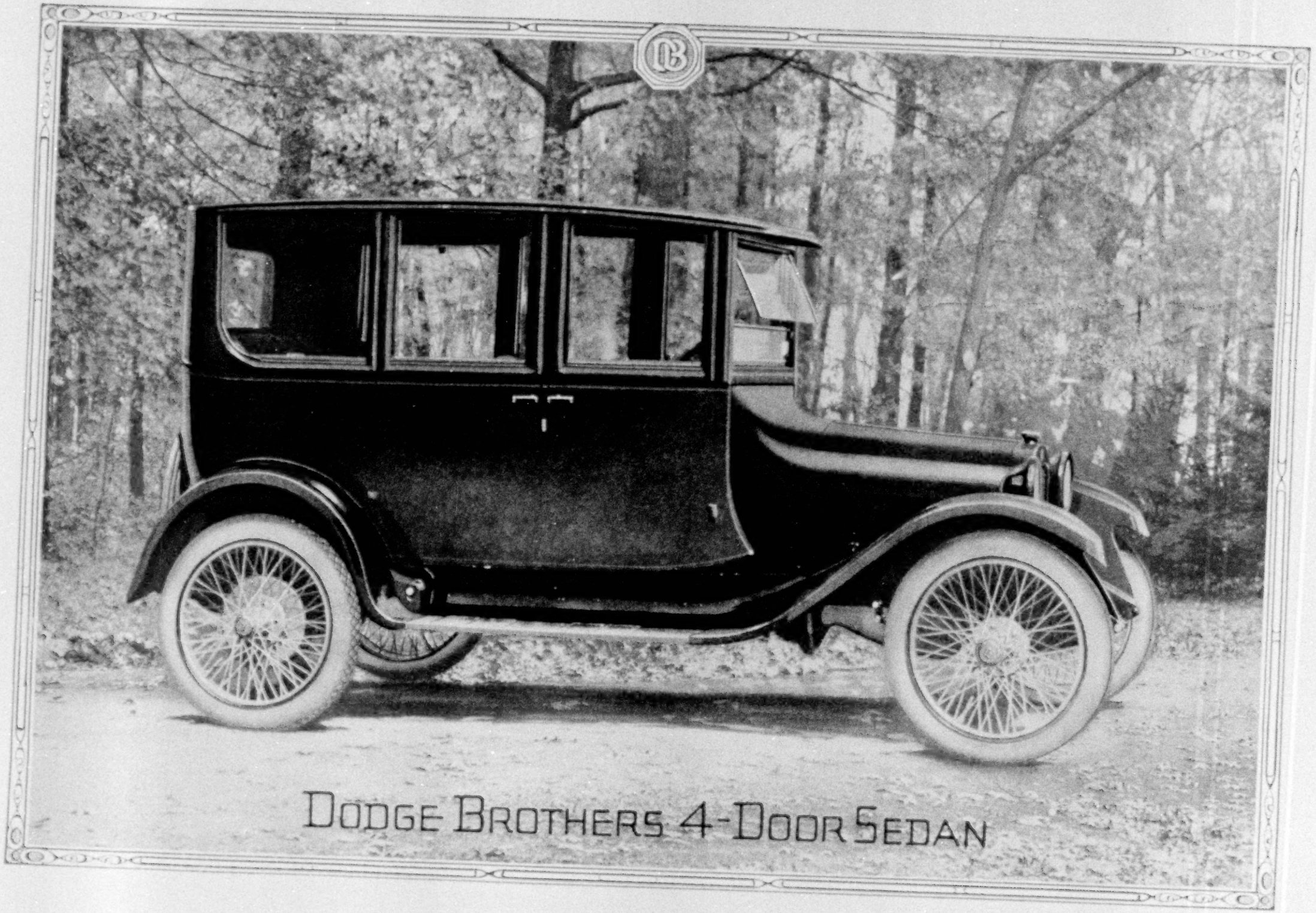
This advance does not exceed an average of eight percent; almost negligible as compared with the advances in other lines of industry, yet enough to cover the increase in the cost of operation.

Only through adequate revenue can there be assured the maintenance of a high standard of telephone service.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

"Mention The Geographic—It identifies you"



DODGE BROTHERS 4-DOOR SEDAN

They couldn't believe it would happen — but it did. And that hospital fire cost the lives of ten bed-ridden patients and three nurses.

Some five billion dollars of business property has been protected from fire by automatic sprinklers.

State Industrial Commissions are guarding the lives of factory employees by requiring this same unfailing protection in business property.

The United States Government insisted on war industries being so protected.

Are *you* one of the dull public ?

"THERE is not much chance of a fire in a hospital," said the doctor.

"Unless somebody overturns an alcohol stove or unless there is defective wiring—or something happens in the heating plant—or unless—well, I guess I'm getting myself in trouble here," he ended ruefully.

Many other good and useful citizens would say just what this doctor said. You never can know and appreciate fire dangers till you *stop* and think how many, many causes there are, and how worthless ordinary methods of prevention have proved themselves.

Hospitals for the insane with splendid equipment for helping or curing the mentally unfit; hospitals where little crippled children grow strong and learn once more to play; hospitals where the blind are taught trades so they can go back to a happy and natural life; hospitals where wounded heroes are made whole again; all with the finest of modern appliances, light, air, sunshine, heroic doctors and nurses—*but* no fire-fighting apparatus worth mentioning.

Constant exposure to the worst kind of death in institutions *dedicated to humanity*, the world over!

Investigate your own Hospital. Find out for yourself what will mean safety for the patients.

Don't put on your nurses, those fine women already giving their lives to the services of others, the cruel burden of responsibility in case of fire.

See that your hospital is equipped with the Grinnell Automatic Sprinkler System. Like a hundred firemen scattered throughout the building, always on the job! When the fire starts, *the water starts* — no chance for the fire to spread.

Read—"Fire Tragedies and Their Remedy"

Parents, trustees or officials will find in "Fire Tragedies and Their Remedy" the unvarnished truth and a path of imperative social service. Write for it today. Address General Fire Extinguisher Company, 293 West Exchange St., Providence, R. I.

GRINNELL

AUTOMATIC SPRINKLER SYSTEM

When the fire starts the water starts

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18 cents a package

CAMELS are in a class by themselves—easily the most refreshing, the most likable cigarette you ever smoked. You can prove that! Simply compare Camels puff-by-puff with any cigarette in the world at any price! Put *quality*, flavor and *cigarette satisfaction* to the utmost test!

Made to meet your taste, Camels never tire it, no matter how liberally you smoke them! The expert blend of choice Turkish and choice Domestic tobaccos makes Camels delightful—so full-bodied, yet so fascinatingly smooth and mellow-mild. Every time you light one you get new and keener enjoyment!

Freedom from any unpleasant cigaretty after taste or any unpleasant cigaretty odor makes Camels as unusual as they are enjoyable.

In fact, Camels appeal to the most fastidious smoker in so many new ways you never will miss the absence of coupons, premiums or gifts. *You'll prefer Camel Quality!*

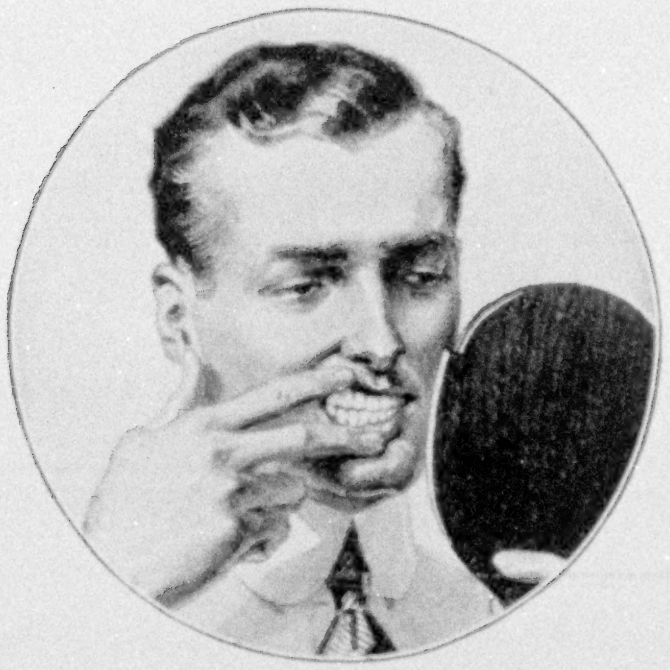
Camels are sold everywhere in scientifically sealed packages of 20 cigarettes or ten packages (200 cigarettes) in a glassine-paper-covered carton. We strongly recommend this carton for the home or office supply or when you travel.

R. J. REYNOLDS TOBACCO CO., Winston-Salem, N. C.

See How Teeth Look

When the Film is Gone

All Statements Approved by High Dental Authorities



This is to urge a ten-day test of a scientific method of teeth cleaning. We supply the test free.

This method combats film — that slimy film which causes most tooth troubles. Old-time methods do not end it, as millions of people know.

That film is what discolors — not the teeth. It is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Millions of germs breed in it. They, with tartar, are the chief cause of pyorrhea.

So it is that film which wrecks teeth. It is ever-present, ever-forming. It clings to teeth, enters crevices and hardens. Now dental science knows a way to combat it. Many careful tests have proved this beyond question. For general use the way is embodied in a dentifrice called Pepsodent, and that is what we urge you to try.

Let It Prove Itself

Pepsodent is based on pepsin, the digestant of albumin. The film is albuminous matter. The object of Pepsodent is to dissolve it, then to day by day combat it.

Pepsin long seemed impossible. It must be activated, and the usual method is an acid harmful to the teeth. But science has discovered a harmless activating method. It makes active pepsin possible. And countless tests seem to prove that this discovery has solved the greatest of dental problems.

See the results for yourself. Send the coupon for a 10-Day Tube. Use like any tooth paste. Note how clean the teeth feel after using. Mark the absence of the slimy film. See how teeth whiten as the fixed film disappears.

These results, when you know their cause, will be a revelation. They will change your ideas on teeth cleaning. They will show you an easy, pleasant way to safe, white, filmless teeth.

Cut out the coupon now.

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A Scientific Product—Sold by Druggists Everywhere

Ten-Day Tube Free

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Mail Ten-Day Tube of Pepsodent to

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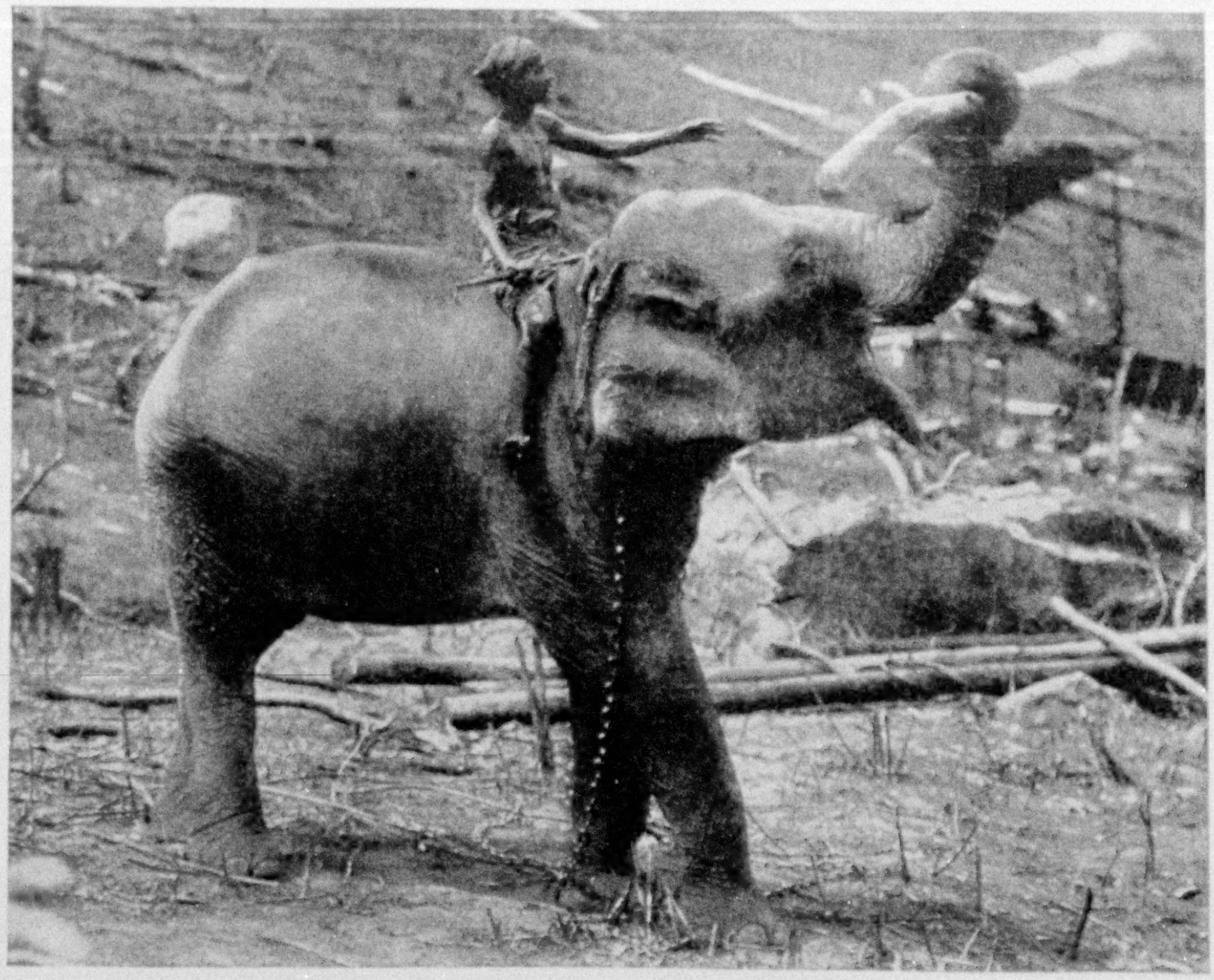

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By GILBERT GROSVENOR, Editor National Geographic Magazine

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The members of the National Geographic Society have the opportunity, through the pictorial study of "humanized" geography, to know at first hand the peculiar characteristics and customs of the peoples of many lands—a knowledge that broadens their vision and makes them more sympathetic with the desire of other nations for enlightenment. "SCENES FROM EVERY LAND" is a geographic pictorial gem.

Today as never before it is a duty and a responsibility to possess a working knowledge

JAPANESE YOUNG WOMEN, UNDER BROAD SUNSHADE HATS, TRANSPLANTING RICE

of GEOGRAPHY. Men everywhere are groping for a way to permanent peace. Peace can never prevail until men know each other and understand each other's viewpoints, hopes, aspirations and habits. "SCENES FROM EVERY LAND" in its 200 superb illustrations presents a fascinating bird's-eye view of the world.

Words, no matter how plain, often fail to convey complete understanding; moreover, one frequently forgets what he reads and hears. Seeing is believing, and to see is not to forget. Words are soon forgotten, but a picture remains engraved upon the memory; so it is that a good illustration often tells more than a column of text. "SCENES FROM EVERY LAND" contains 200 extraordinary geographic illustrations.

In *The Geographic* each year approximately 1,200 illustrations from photographs are published—many in natural colors, others in black and white and in gravure. Periodically a volume of "SCENES FROM EVERY LAND" is issued, containing a selection of 200 pictures—one-eighth of them in full natural colors. These are of the best illustrations from the Magazine and many entirely new subjects especially selected for this purpose. The pictures in "SCENES FROM EVERY LAND" are a selection from selections and the acme of geographic illustration.

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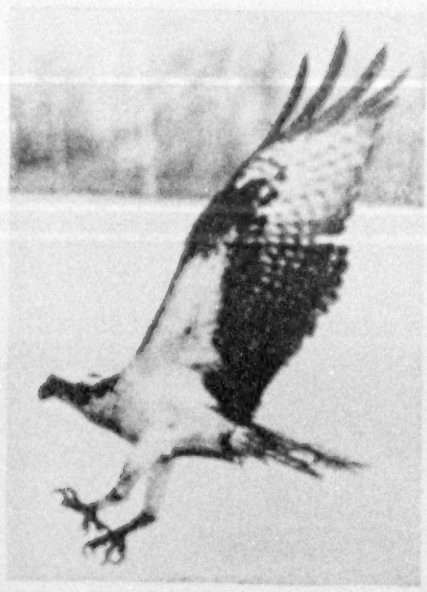

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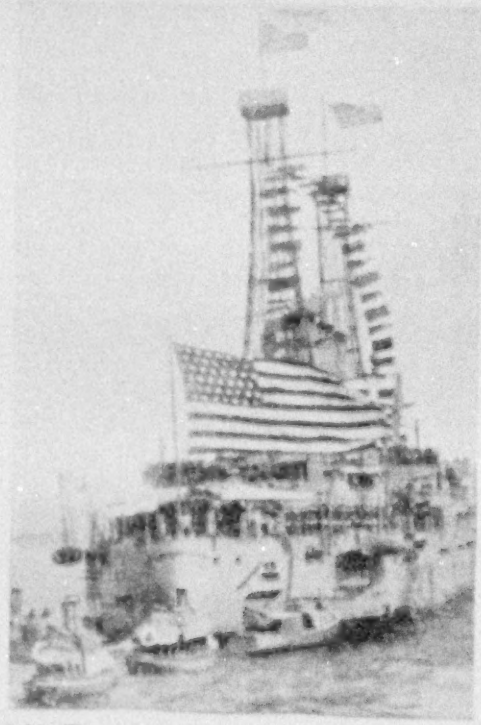

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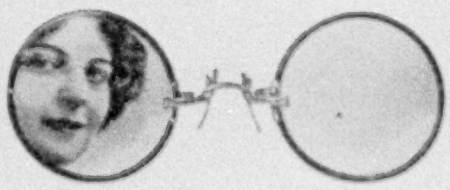

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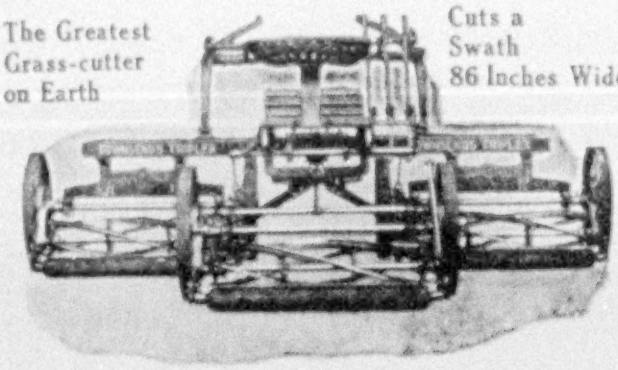
Cuts a Swath 86 Inches Wide



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One mower may be climbing a knoll, the second skimming a level, while the third pares a hollow. Drawn by one horse and operated by one man, the TRIPLEX will mow more lawn in a day than the best motor mower ever made; cut it better and at a fraction of the cost.

Drawn by one horse and operated by one man, it will mow more lawn in a day than any three ordinary horse-drawn mowers with three horses and three men.

Does not smash the grass to earth and plaster it in the mud in springtime, neither does it crush the life out of the grass between hot rollers and hard, hot ground in summer, as does the motor mower.

The public is warned not to purchase mowers infringing the Townsend Patent, No. 1,209,519, December 19th, 1916.

Write for catalog illustrating all types of Lawn Mowers.

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Gives 50% more mileage. **Preserves tubes.** *7 years' success in 40 countries.* **Not a filler.** Does not affect resiliency. Keeps tires fully inflated. Prevents rim cuts, etc. *Send for booklet.* Dealer correspondence invited.

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So many requests are being constantly received regarding lantern slides from the copyright photographs in the Geographic that arrangements have been completed to supply them to members of the Society. Slides are not kept in stock, each order being made up as received, and will be delivered within two weeks after receipt of order, unless otherwise advised.

The copyright notice must appear on each slide. The purchase of lantern slides does not carry with it the authority to publish the pictures and they cannot be used for advertising purposes.

Slides cannot be sent upon approval and a remittance must accompany each order. The slides will be carefully packed and sent by express collect. Prices in the United States (standard size), black and white, 75 cents each; colored, $1.50. Address

DEPT. L, NATIONAL GEOGRAPHIC MAGAZINE, WASHINGTON, D. C.

Shakespeare's "Seven Ages of Man"

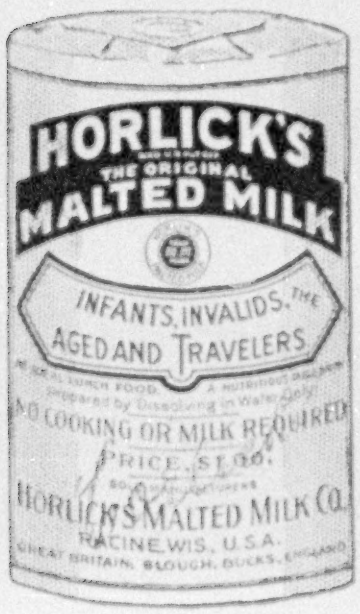
pay tribute to

HORLICK'S The Original Malted Milk

From across every sea and land have come thousands of grateful letters (a few are reproduced in opposite column) to the Horlick offices, paying tribute to Horlick's Malted Milk. Mothers of contented babies, soldiers after a campaign, explorers back from the ice fields, high tension business and professional workers, invalids and the aged — all tell of the different needs that "Horlick's" has satisfied.

"Horlick's" has proved itself to be an excellent food for every age of Shakespeare's "Seven." It is so complete in itself as to contain every element of nutrition necessary to sustain life—even of the most robust—and yet it is perfectly digestible by the delicate stomach of the infant and the invalid.

The Original Round Package
for over a third of a Century



"First the infant in the nurse's arms"

1st "Words fail to express how grateful I am to Horlick's Malted Milk. My babe was given up; it was said she would not live through the night. But the next morning it still lived, and while we anxiously watched it, a neighbor persuaded us to try 'Horlick's.' It was like putting oil on the wick of a dying lamp; she improved rapidly, and is now the joy of the house"

"Then the school boy with his shining morning face"

2d "I raised five children on 'Horlick's,' and they all love it still. It can't be beat as a nutritious lunch between meals for a growing boy or girl"

"Then the soldier seeking reputation at the cannon's mouth"

3d "Clara Barton of the Red Cross in her stories of the Spanish American War tells how Colonel Roosevelt asked the Red Cross to sell him some supplies for some sick men in his regiment, but she declined. We cannot sell them, but you can have them for asking. Oh, then I do ask for them—All right, what is on your list? The list was Horlick's Malted Milk, etc. Colonel Roosevelt slung the heavy sack over his shoulder, and trudged off through the jungle"

"And then the lover with his ballad"

4th "Horlick's growth as a fountain favorite has been marvelous. A constant stream of young couples in the afternoon and evening call for Horlick's Malted Milk, chocolate or plain. 'Horlick's' is a favorite lunch hour drink around universities with the students. A glass making a meal, they find it very economical and healthful"

"And then the justice full of wise saws"

5th "When I need an invigorator as the result of my work I drink a cup of 'Horlick's.' I have used it constantly for several years, and find it cannot be beat for weak stomach, as a diet. In fact, it is all that is claimed for it"

"The sixth age with spectacles on nose"

6th "I am 50 years old, and consider it a fortunate day when a friend induced me to try a cup of Horlick's Malted Milk. I used it with benefit and pleasure two or three times a day. It is delicious and has done me a world of good"

"Last scene of all that ends this eventful history"

7th "I could not do without it. It surely is a sleep producer and I am a nervous person, but Horlick's Malted Milk has helped me greatly. I have learned by experience that 'Horlick's' is as excellent for well people as for invalids"

Trial sample mailed upon request

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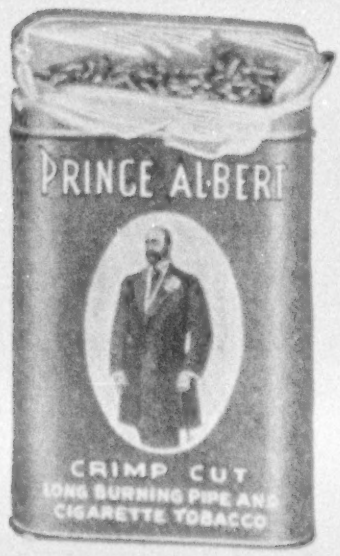
SAY, you'll have a streak of smokeluck that'll put pep-in-your-smokemotor, all right, if you'll ring-in with a jimmy pipe or cigarette papers and nail some Prince Albert for packing!

Just between ourselves, you never will wise-up to high-spot-smoke-joy until you can call a pipe or a home-made cigarette by its first name, then, to hit the peak-of-pleasure you land square on that two-fisted-man-tobacco, Prince Albert!

Well, sir, you'll be so all-fired happy you'll want to get a photograph of yourself breezing up the pike with your smokethrottle wide open! Quality makes Prince Albert so different, so appealing. And, P. A. can't bite or parch. Both are cut out by our exclusive patented process! Right now while summer's young you get out your old jimmy pipe or the "papers" and land on some P. A. for what ails your particular smokeappetite!

R. J. REYNOLDS TOBACCO CO., Winston-Salem, N. C.

Buy Prince Albert everywhere tobacco is sold. Toppy red bags, tidy red tins, handsome pound and half pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.



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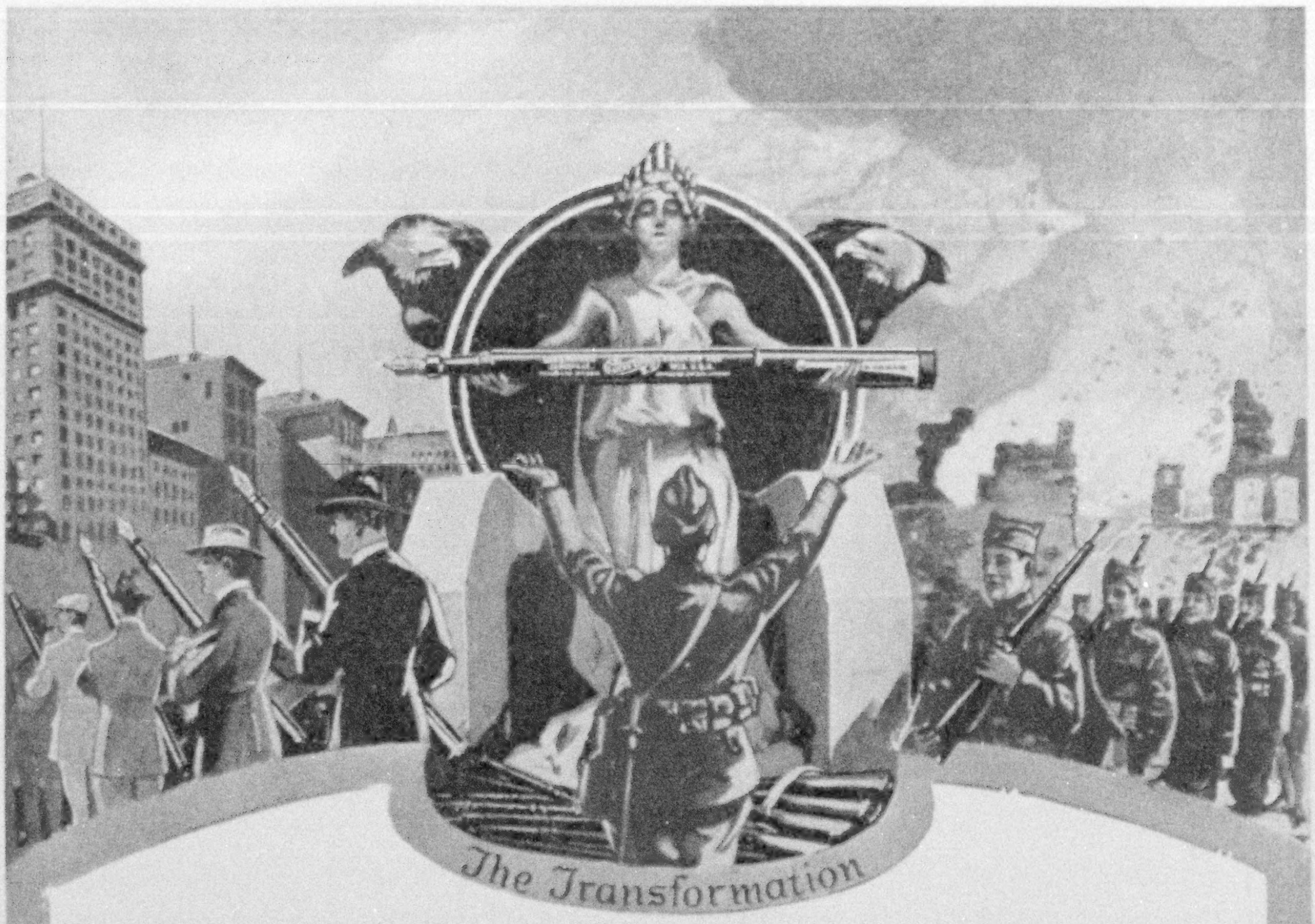

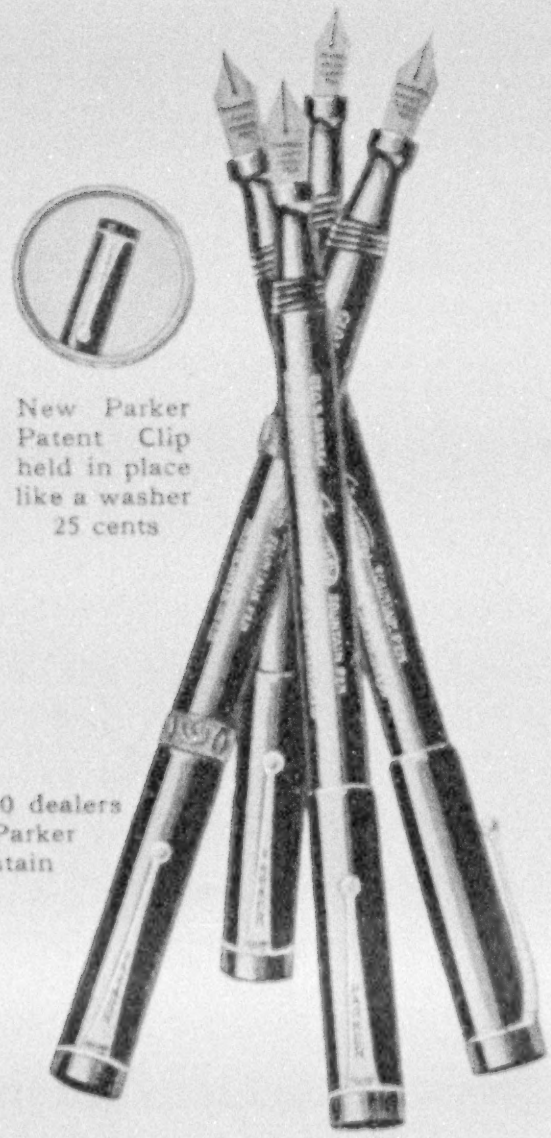

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